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Releases of Beneficial Organisms in the United States and Territories—1983



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Abstract

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In 1983, well over 15 million individuals of at least 164 species of insect and mite parasites and predators (almost exclusively of foreign origin) were released against at least 76 insect and mite pests (also predominantly introduced species) in the United States and its territories. Also released that year were over 11 million individuals of 29 species of exotic natural enemies of 21 species of introduced weeds, 3 microbial pathogens, and 7 species of pollinators and other beneficial organisms. These releases (from either field collections or cultures of foreign origin) or recolonizations (from previously established populations in the United States) were made in 51 states, territories, and the District of Columbia. U.S. facilities shipped over 80 biological control agents and pollinators to foreign countries in 1983.

Keywords: Biological control, introductions, natural enemies, parasites (parasitoids), pollinators, predators, weed control agents.

This is the third annual report on the releases of introduced beneficial organisms in the United States and its territories for biological control of pests or for crop pollination. It is produced from the database Releases of Beneficial Organisms (ROBO) of the USDA-ARS Biological Control Documentation Center, BARC-West, Building 004, Beltsville, MD 20702; telephone (301) 504-6350. The report does not contain many details published in the first two reports, but those data and more detailed reports are available from the Center as photocopies or on diskette. The ROBO database can also produce computer reports of shipments sent or received; of releases from a facility, state, or territory; and of individual releases.

This report will probably be the last one published in this form since the information will be available in electronic formats in the future.

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Contents

Introduction	1
Abbreviations Used	4
Section I—Introduced Parasites and Predators Released in the U.S. and Territories	5
Part A—Arranged alphabetically by genus-species of released organism, state, county - complete record with notes	*
Part B—Target host/prey arranged alphabetically by class, order, family, genus, species, with alphabetical list of introduced beneficial species released against it	5
Section II—Introduced Weed Control Agents Released in the U.S. and Territories	19
Part A—Arranged alphabetically by genus-species of released organism, state, county - complete record with notes	*
Part B—Target host/prey arranged alphabetically by class, order, family, genus, species, with alphabetical list of introduced beneficial species released against it	19
Section III—Introduced Microbial Organisms Released in the U.S. and Territories	23
Section IV—Introduced Pollinators and Other Beneficial Species Released in the U.S. and Territories	25
Section V—Species of Introduced Beneficial Organisms (Excluding Plants) Released in the U.S. and Territories	31
Section VI—Releases of Introduced Beneficial Organisms by State/Territory and County	41
Section VII—Shipments of Beneficial Organisms from U.S. and Territorial Facilities to Foreign Countries	86

Section VIII—Participating Research and Action Agency Personnel	111
Part A—Quarantine facilities, listed alphabetically by acronym, with addresses and quarantine officers	111
Part B—All personnel, listed alphabetically by facility acronym, with addresses	*
Section IX—Summary Information	113

* Not included in this publication. See inside front cover for information about availability.

Releases of Beneficial Organisms in the United States and Territories--1983^{1/}

Compiled by Jack R. Coulson

Introduction

Biological control of pests can be improved by good management of data. The search for, collection, and importation of exotic natural enemies for release, establishment, and dispersal as biological control agents of pests in the United States and its Territories represent excellent opportunities, indeed an obligation, to collect and store valuable information of present and future scientific and regulatory interest. The critical need to compile such data for improving biological pest control is well recognized (Bottrell et al. 1976; USDA 1978; Battenfield 1983; Coulson 1992a). This type of information is of current and historical interest not only to biological control and integrated pest management scientists and administrators but also to systematists and ecologists. Unfortunately, detailed records of biological control attempts have often not been published, or even kept in many instances (Greathead 1986). Compilations of the results of these activities (for example, Clausen 1978) are usually based only on generally incomplete published information.

The introduction of living plant germplasm into the United States has long been well documented in a series of annual publications of the U.S. Department of Agriculture, the latest being for 1992 importations (Norris, [1993]), and by the computerized Germplasm Resources Information Network (GRIN) (Perry et al. 1988). This publication is the third of a series designed to similarly document the importation of other beneficial organisms into the United States and its

Territories. Similar reports, for 1981 and 1982, have been published (Coulson et al. 1988; Coulson 1992b; copies of the latter are still available). These present information (mostly otherwise unpublished) on one of the activities involved in importation programs, that is, the field or greenhouse release of introduced biological control agents and pollinators.

As indicated in the Table of Contents, this report does not contain the same details published in Coulson et al. (1988) and Coulson (1992b). Only summary information on releases (as given in Part B of Sections I and II, and Sections V, VI and IX of previous reports) are given here, together with Sections III, IV, and VII, listing releases of introduced microbial organisms, releases of introduced pollinators and other beneficials, and shipments to foreign countries in 1983, respectively. All or portions of the other, more detailed sections can be obtained upon request (as either a single photocopy or data on diskette in WordPerfect® or ASCII format) from the Biological Control Documentation Center. The following specialized Wang-produced reports can also be obtained:

1. annual reports of releases by State or facility,
2. detailed reports of individual releases,
3. annual reports of shipments or consignments from each domestic facility,
4. annual reports of materials received by State or facility,
5. detailed reports of individual shipments (quarantine and nonquarantine),
6. annual reports of shipments from each overseas or foreign facility,
7. annual reports of foreign shipments received by each domestic facility,
8. detailed reports of individual foreign or overseas shipments.

^{1/}Although the data on which this publication is based were collected in 1983, much of the information presented is not published elsewhere. These data are useful as scientific and historical records of the importation and release of exotic organisms in the United States and its Territories. Further details on these records can be obtained from the pertinent organizations listed in the unpublished section VIII of the complete report, a photocopy of which is available, or from the database. This book may be the last in which these data will be published in an annual format since such information for subsequent years will be readily available in electronic form from the ROBO data base.

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Examples of individual release reports (item 2 in the preceding list) have been given in Coulson et al. (1988) and Coulson (1992b).

Brief descriptions of the ROBO data base and its development have been published (Coulson, 1987, 1992a, 1992b). The data base still resides on the Wang computer, but efforts are now underway to reprogram ROBO to run in Oracle on a Solbourne UNIX minicomputer via the Germplasm Resources Information Network (GRIN), which is accessible via the Internet. Publication of a detailed description of the data base is planned after reprogramming has been completed.

In the meantime, entry of 1984 importation and release data is underway on the Wang, which is expected to be the last use of the Wang system. After entry of 1984 records is complete, those data, together with all 1981, 1982 and 1983 data, completely updated as to nomenclatural changes and other new information, will be published on CD-ROM. Future ROBO reports will be available on line, but periodic publication of such comprehensive data on CD-ROM, and of core data such as contained in this book, is planned.

As noted in previous reports, this publication is modeled after the annual bulletin of releases of biological control organisms in Canada published since the 1930s. The most recent issue reports 1991 releases (Sarazin 1992).

Most of the data included in ROBO was provided by many of the research and other scientists and action agency personnel listed in unpublished section VIII, copies of which are available from the Documentation Center. The voluntary cooperation of those many contributors is greatly appreciated.

All scientific names in this publication have been verified by systematists of the Systematic Entomology Laboratory (SEL) and the Systematic Botany and Mycology Laboratory (SBML), ARS, Beltsville, MD. Their efforts are very much appreciated. The most current names for the organisms according to these specialists as of December 1993 have been used in this publication. The name under which the organism was originally imported or released is retained in the ROBO data base, and searches can be made using both original and current names. The higher classification system for arthropods is that used by SEL scientists. The system used for plants in section II is that of Cronquist (1981).

The scientific name in this book for the plant in the United States known as Russian thistle, *Salsola australis* R. Br. (= *S. iberica*, *S. pestifer*, or *S. kali* of authors), is in accordance with the opinion of J.H. Kirkbride, SBML (personal communication), based on Botschantzev (1974). The scientific name of the plant known as Dalmatian toadflax used in this report is *Linaria dalmatica* (L.) Mill. based on treatment by Sutton (1988). In regard to the name for musk or nodding thistle used in this report, we have returned to the use of, as in the 1981 report (Coulson et al., 1988), the subspecific epithet *Carduus nutans* subsp. *leiophyllus* (Petr.) Stoj. & Stef. (= *C. thoermeri* Weinm. *sensu* McCarty), in accordance with the treatment of Desrochers et al., 1988a,b, and rules of botanical nomenclature (J. H. Wiersema, SBML, pers. commun.); some of the insect releases against musk thistle (as *C. nutans* or *C. thoermeri*) in the eastern U.S. may have been made against *C. nutans* subsp. *nutans*, since those authors record that subspecies to be prevalent in eastern Canada. Though the scientific name *Euphorbia esula* L. is used for the weed known as "leafy spurge," it must be pointed out that the taxonomy of North American leafy spurge is still controversial among botanists, some of whom consider North American populations to be a complex of species and hybrids (Radcliffe-Smith 1985; Mahlberg et al. 1987; Crompton et al 1990; Holden and Mahlberg 1992). The scientific and common names of all plants recorded here agree with those used by the ARS Germplasm Resources Information Network (GRIN), as checked by J. H. Wiersema (SBML); author abbreviations are in accordance with Brummitt and Powell (1992), as used in the GRIN system.

Suggestions for citation in publications of release data from the ROBO data base were given in previous published ROBO reports (Coulson et al. 1988, Coulson 1992b), as were explanations of some of the data entries in parts A of sections I and II.

ROBO is a dynamic data base, capable of continual updating with new information. Therefore, readers are encouraged to notify the ARS Biological Control Documentation Center of (1) any errors found in this or previous ROBO reports, (2) additional or currently missing information as indicated by question marks, and (3) any changes to scientific names as a result of the publication of descriptions of species recorded here as "sp.," or otherwise incomplete names, or as a result of new taxonomic studies. Many of these kinds of corrections to earlier ROBO reports are reflected in the present publication. Comments can be addressed to the Biological Control Documentation Center, Bldg. 004, BARC-West, Beltsville, MD 20705.

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Abbreviations Used

Types of Beneficial Organisms

MI	-	microbial
PA	-	parasite
PO	-	pollinator
PR	-	predator
WE	-	weed feeder
OT	-	other

Developmental Stages of Organisms Released

A	-	adults
C	-	cocoons
DHA, DHP, etc.	-	diseased host adults, diseased host pupae, and so forth
E	-	eggs
EM	-	egg masses
I	-	immatures
J	-	juveniles (for nematodes)
L	-	larvae
MU	-	mummies
N	-	nymphs
P	-	pupae, puparia
PHA, PHE, etc.	-	parasitized host adults, parasitized host eggs, and so forth

Other Abbreviations

e	-	estimate
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States and Territories

AK	Alaska
AL	Alabama
AR	Arkansas
AS	American Samoa
AZ	Arizona
CA	California
CO	Colorado
CT	Connecticut
CZ	Canal Zone
DC	District of Columbia
DE	Delaware
FL	Florida
FM	Federated States of Micronesia
GA	Georgia
GU	Guam
HI	Hawaii
IA	Iowa
ID	Idaho
IL	Illinois
IN	Indiana
KS	Kansas
KY	Kentucky
LA	Louisiana
MA	Massachusetts
MD	Maryland
ME	Maine
MH	Marshall Islands
MI	Michigan
MN	Minnesota

MO	Missouri
MP	North Mariana Islands
MS	Mississippi
NC	North Carolina
MT	Montana
ND	North Dakota
NE	Nebraska
NH	New Hampshire
NJ	New Jersey
NM	New Mexico
NV	Nevada
NY	New York
OH	Ohio
OK	Oklahoma
OR	Oregon
PA	Pennsylvania
PR	Puerto Rico
PW	Palau
RI	Rhode Island
SC	South Carolina
SD	South Dakota
TN	Tennessee
TX	Texas
UT	Utah
VA	Virginia
VI	Virgin Islands (U.S.)
VT	Vermont
WA	Washington
WI	Wisconsin
WV	West Virginia
WY	Wyoming

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION I -INTRODUCED PARASITES AND PREDATORS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host/Prey Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It; Followed by Summary of Target Host/Prey Arranged Alphabetically by Common Name

PHYLUM: ARTHROPODA

Class: Arachnida (Subclass Acari)

Order of Host/Prey: Acariformes

Family of Host/Prey: Tetranychidae

Host/Prey Genus, species, author: *Oligonychus punicae* (Hirst)

Common name of host/prey: avocado brown mite

Species Released: *Euseius fructicolus*

Euseius scutalis

Euseius sp. nr. *citrifolius*

Euseius vivax

Galendromus occidentalis

Iphiseius degenerans

Phytoseiulus macropilis

Typhlodromips sp. nr. *tunis*

Typhlodromus tiliae

Euseius quetzali

Euseius sp. nr. *concordis*

Euseius stipulatus

Galendromus annectens

Galendromus porresi

Neoseiulus californicus

Phytoseius hawaiiensis

Typhlodromus rickeri

Host/Prey Genus, species, author: *Panonychus citri* McGregor

Common name of host/prey: citrus red mite

Species Released: *Amblyseius limonicus*

Euseius fructicolus

Euseius quetzali

Euseius sp. nr. *concordis*

Euseius stipulatus

Galendromus annectens

Neoseiulus californicus

Typhlodromips sp. nr. *tunis*

Typhlodromus cornus

Typhlodromus tiliae

Euseius concordis

Euseius hibisci

Euseius scutalis

Euseius sp. nr. *citrifolius*

Euseius vivax

Galendromus porresi

Phytoseius hawaiiensis

Typhlodromips swirskii

Typhlodromus rickeri

Host/Prey Genus, species, author: *Tetranychus cinnabarinus* (Boisduval)

Common name of host/prey: carmine spider mite

Species Released: *Amblyseius longispinosus*

Neoseiulus californicus

Galendromus occidentalis

Scolothrips sexmaculatus

Host/Prey Genus, species, author: *Tetranychus urticae* Koch

Common name of host/prey: twospotted spider mite

Species Released: *Amblyseius* sp.

Scymnus sp.

Phytoseiulus persimilis

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Class: Insecta

Order of Host/Prey: Blattodea

Family of Host/Prey: Blattellidae

Host/Prey Genus, species, author: *Supella longipalpa* (Fabricius)

Common name of host/prey: brownbanded cockroach

Species Released: *Comperia merceti*

Order of Host/Prey: Coleoptera

Family of Host/Prey: Chrysomelidae

Host/Prey Genus, species, author: *Crioceris asparagi* (Linnaeus)

Common name of host/prey: asparagus beetle

Species Released: *Lemophagus crioceritor*

Tetrastichus coeruleus

Meigenia mutabilis

Tetrastichus crioceridis

Host/Prey Genus, species, author: *Crioceris duodecimpunctata* (Linnaeus)

Common name of host/prey: spotted asparagus beetle

Species Released: *Tetrastichus crioceridis*

Host/Prey Genus, species, author: *Crioceris* spp.

Common name of host/prey: --

Species Released: *Meigenia mutabilis*

Tetrastichus crioceridis

Host/Prey Genus, species, author: *Leptinotarsa decemlineata* (Say)

Common name of host/prey: Colorado potato beetle

Species Released: *Edovum puttleri*

Host/Prey Genus, species, author: *Oulema melanopus* (Linnaeus)

Common name of host/prey: cereal leaf beetle

Species Released: *Diaparsis temporalis*

Tetrastichus julis

Lemophagus curtus

Host/Prey Genus, species, author: *Xanthogaleruca luteola* (Müller)

Common name of host/prey: elm leaf beetle

Species Released: *Eryniiopsis antennata*

Oomyzus gallerucae

Family of Host/Prey: Coccinellidae

Host/Prey Genus, species, author: *Epilachna varivestis* Mulsant

Common name of host/prey: Mexican bean beetle

Species Released: *Coccipolipus epilachnae*

Pediobius foveolatus

Oplonus ebulinus

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Family of Host/Prey: Curculionidae

Host/Prey Genus, species, author: Anthonomus grandis Boheman

Common name of host/prey: boll weevil

Species Released: Catolaccus grandis

Heterospilus annulatus

Heterospilus megalopus

Host/Prey Genus, species, author: Hypera brunneipennis (Boheman)

Common name of host/prey: Egyptian alfalfa weevil

Species Released: Bathyplectes anurus

Microctonus aethiopoides

Host/Prey Genus, species, author: Hypera postica (Gyllenhal)

Common name of host/prey: alfalfa weevil

Species Released: Bathyplectes anurus

Bathyplectes curculionis

Bathyplectes stenostigma

Dibrachoides dynastes

Microctonus aethiopoides

Microctonus colesi

Oomyzus incertus

Stethynium empoascae

Host/Prey Genus, species, author: Sitona hispidulus (Fabricius)

Common name of host/prey: clover root curculio

Species Released: Microctonus aethiopoides

Family of Host/Prey: Nitidulidae

Host/Prey Genus, species, author: Carpophilus hemipterus (Linnaeus)

Common name of host/prey: driedfruit beetle

Species Released: Cerchysiella utilis

Host/Prey Genus, species, author: Carpophilus humeralis (Fabricius)

Common name of host/prey: pineapple souring beetle

Species Released: Cerchysiella utilis

Family of Host/Prey: Scarabaeidae

Host/Prey Genus, species, author: Popillia japonica Newman

Common name of host/prey: Japanese beetle

Species Released: Istocheta aldrichi

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Order of Host/Prey: Diptera

Family of Host/Prey: Agromyzidae

Host/Prey Genus, species, author: Liriomyza sativae Blanchard

Common name of host/prey: vegetable leafminer

Species Released: Chrysocharis caribea

Chrysonotomyia punctiventris

Halticoptera circulus

Chrysocharis oscinidis

Ganaspidium utilis

Opius dissitus

Host/Prey Genus, species, author: Liriomyza trifolii (Burgess)

Common name of host/prey: leafminer

Species Released: Chrysocharis caribea

Chrysonotomyia punctiventris

Ganaspidium utilis

Opius dissitus

Chrysocharis oscinidis

Diglyphus begini

Halticoptera circulus

Family of Host/Prey: Muscidae

Host/Prey Genus, species, author: Haematobia irritans (Linnaeus)

Common name of host/prey: horn fly

Species Released: Atholus maindronii

[See also Section IV, p. 25, for releases of other beneficials against cattle dung & horn fly]

Host/Prey Genus, species, author: Musca domestica Linnaeus

Common name of host/prey: house fly

Species Released: Atholus maindronii

Muscidifurax zaraptor

Host/Prey Genus, species, author: Stomoxys calcitrans (Linnaeus)

Common name of host/prey: stable fly

Species Released: Trichopria stomoxydis

Family of Host/Prey: Tephritidae

Host/Prey Genus, species, author: Anastrepha suspensa (Loew)

Common name of host/prey: Caribbean fruit fly

Species Released: Diachasmimorpha tryoni

Psytalia incisi

Psytalia concolor

Host/Prey Genus, species, author: Ceratitis capitata (Wiedemann)

Common name of host/prey: Mediterranean fruit fly

Species Released: Diachasmimorpha longicaudatas

Steinernema carpocapsae

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Family of Host/Prey: Tephritidae (continued)

Host/Prey Genus, species, author: *Dacus cucurbitae* Coquillett

Common name of host/prey: melon fly

Species Released: *Psytalia incisi*

Host/Prey Genus, species, author: *Dacus dorsalis* Hendel

Common name of host/prey: oriental fruit fly

Species Released: *Psytalia incisi*

Host/Prey Genus, species, author: *Rhagoletis completa* Cresson

Common name of host/prey: walnut husk fly

Species Released: *Biosteres sublaevis*

Order of Host/Prey: Heteroptera

Family of Host/Prey: Miridae

Host/Prey Genus, species, author: *Adelphocoris lineolatus* (Goeze)

Common name of host/prey: alfalfa plant bug

Species Released: *Peristenus adelphocoridis*

Peristenus digoneutis

Peristenus stygicus

Host/Prey Genus, species, author: *Lygus hesperus* Knight

Common name of host/prey: western tarnished plant bug

Species Released: *Peristenus stygicus*

Host/Prey Genus, species, author: *Lygus lineolaris* (Palisot)

Common name of host/prey: tarnished plant bug

Species Released: *Peristenus digoneutis*

Peristenus stygicus

Host/Prey Genus, species, author: *Lygus* spp.

Common name of host/prey: plant bugs

Species Released: *Peristenus stygicus*

Family of Host/Prey: Pentatomidae

Host/Prey Genus, species, author: *Nezara viridula* (Linnaeus)

Common name of host/prey: southern green stink bug

Species Released: *Telenomus chloropus*

Trichopoda pilipes

Trissolcus basalus

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION I -INTRODUCED PARASITES AND PREDATORS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host/Prey Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It; Followed by Summary of Target Host/Prey Arranged Alphabetically by Common Name

Order of Host/Prey: Homoptera

Family of Host/Prey: Aleyrodidae

Host/Prey Genus, species, author: Aleurocanthus spiniferus (Quaintance)

Common name of host/prey: orange spiny whitefly

Species Released: Encarsia smithi

Host/Prey Genus, species, author: Aleurodicus dispersus Russell

Common name of host/prey: spiraling whitefly

Species Released: Delphastus pusillus

Encarsia sp.

Nephaspis oculata

Encarsia ?haitiensis

Nephaspis bicolor

Host/Prey Genus, species, author: Aleurothrixus floccosus (Maskell)

Common name of host/prey: woolly whitefly

Species Released: Eretmocerus sp.

Host/Prey Genus, species, author: Dialeurodes citri (Ashmead)

Common name of host/prey: citrus whitefly

Species Released: Encarsia lahorensis

Host/Prey Genus, species, author: Parabemisia myricae (Kuwana)

Common name of host/prey: Japanese bayberry whitefly

Species Released: Encarsia n. sp. I Förster

Eretmocerus n. sp. Haldeman

Encarsia n. sp.

Host/Prey Genus, species, author: Trialeurodes vaporariorum (Westwood)

Common name of host/prey: greenhouse whitefly

Species Released: Encarsia formosa

Family of Host/Prey: Aphididae

Host/Prey Genus, species, author: Acyrthosiphon kondoi Shinji

Common name of host/prey: blue alfalfa aphid

Species Released: Aphidius eadyi

Aphidius smithi

Aphidius ervi

Host/Prey Genus, species, author: Acyrthosiphon pisum (Harris)

Common name of host/prey: pea aphid

Species Released: Aphidius ervi

Ephedrus plagiator

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION I -INTRODUCED PARASITES AND PREDATORS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host/Prey Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It; Followed by Summary of Target Host/Prey Arranged Alphabetically by Common Name

Family of Host/Prey: Aphididae (continued)

Host/Prey Genus, species, author: Callaphis juglandis (Goeze)

Common name of host/prey: large walnut aphid

Species Released: Praon callaphis

Host/Prey Genus, species, author: Schizaphis graminum (Rondani)

Common name of host/prey: greenbug

Species Released: Aphidius colemani

Hippodamia variegata

Ephedrus plagiator

Lioadalia flavomaculata

Host/Prey Genus, species, author: Tinocallis platani (Kaltenbach)

Common name of host/prey:

Species Released: Trioxys tenuicaudus

Host/Prey Genus, species, author: aphids

Common name of host/prey: --

Species Released: Coccinella septempunctata

Harmonia axyridis

Host/Prey Genus, species, author: aphids, pecan

Common name of host/prey: --

Species Released: Harmonia axyridis

Family of Host/Prey: Cicadellidae

Host/Prey Genus, species, author: Empoasca fabae (Harris)

Common name of host/prey: potato leafhopper

Species Released: Anagrus empoascae

Anagrus giraulti

Stethynium empoascae

Anagrus flaveolus

Arescon enocki

Family of Host/Prey: Coccidae

Host/Prey Genus, species, author: Pulvinaria delottoi Gill

Common name of host/prey: --

Species Released: Exochomus flavipes

Metaphycus funicularis

Hyperaspis senegalensis hottentota

Metaphycus stramineus

Host/Prey Genus, species, author: Pulvinaria mesembryanthemi (Vallot)

Common name of host/prey: ice plant scale

Species Released: Encyrtus saliens

Hyperaspis senegalensis hottentota

Metaphycus stramineus

Exochomus flavipes

Metaphycus funicularis

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION I -INTRODUCED PARASITES AND PREDATORS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host/Prey Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It; Followed by Summary of Target Host/Prey Arranged Alphabetically by Common Name

Family of Host/Prey: Coccidae (continued)

Host/Prey Genus, species, author: Saissetia oleae (Olivier)

Common name of host/prey: black scale

Species Released: Aloencyrtus saissetiae

Coccophagus rusti

Prococcophagus saissetiae

Family of Host/Prey: Delphacidae

Host/Prey Genus, species, author: Perkinsiella saccharicida Kirkaldy

Common name of host/prey: sugarcane delphacid

Species Released: Tytthus mundulus

Family of Host/Prey: Diaspididae

Host/Prey Genus, species, author: Pseudaulacaspis prunicola (Maskell)

Common name of host/prey: --

Species Released: Arrhenophagus albitibiae

Host/Prey Genus, species, author: Unaspis euonymi (Comstock)

Common name of host/prey: euonymus scale

Species Released: Cybocephalus nipponicus

Encarsia citrina

Encarsia fasciata

Pteroptrix n. sp.

Family of Host/Prey: Margarodidae

Host/Prey Genus, species, author: Matsucoccus resinosae Bean & Godwin

Common name of host/prey: red pine scale

Species Released: Harmonia axyridis

Family of Host/Prey: Psyllidae

Host/Prey Genus, species, author: Cacopsylla pyricola (Förster)

Common name of host/prey: pear psylla

Species Released: Anthocoris nemorum

Chrysoperla carnea

Menochilus sexmaculatus

Prionomitus mitratus

Order of Host/Prey: Lepidoptera

Family of Host/Prey:

Host/Prey Genus, species, author: potential alternate lepidopterous hosts

Common name of host/prey:

Species Released: Compsilura concinnata

Meteorus pulchricornis

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION I -INTRODUCED PARASITES AND PREDATORS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host/Prey Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It; Followed by Summary of Target Host/Prey Arranged Alphabetically by Common Name

Family of Host/Prey: Arctiidae

Host/Prey Genus, species, author: Hyphantria cunea (Drury)

Common name of host/prey: fall webworm

Species Released: Aleiodes lymantriae

Brachymeria lasus

Brachymeria intermedia

Pimpla disparis

Family of Host/Prey: Coleophoridae

Host/Prey Genus, species, author: Coleophora laricella (Hübner)

Common name of host/prey: larch casebearer

Species Released: Diadegma laricinellum

Family of Host/Prey: Crambidae

Host/Prey Genus, species, author: Eoreuma loftini (Dyar)

Common name of host/prey: Mexican rice borer

Species Released: Allorhogas pyralophagus

Rhaconotus roslinensis

Pediobius furvus

Family of Host/Prey: Gelechiidae

Host/Prey Genus, species, author: Keiferia lycopersicella (Walsingham)

Common name of host/prey: tomato pinworm

Species Released: Campoplex n. sp.

Host/Prey Genus, species, author: Pectinophora gossypiella (Saunders)

Common name of host/prey: pink bollworm

Species Released: Goniozus legneri

Habrobracon gelechiae

Family of Host/Prey: Gracillariidae

Host/Prey Genus, species, author: Phyllonorycter blancardella (Fabricius)

Common name of host/prey: spotted tentiform leafminer

Species Released: Pholletesor pedias

Host/Prey Genus, species, author: Phyllonorycter crataegella (Clemens)

Common name of host/prey: apple blotch leafminer

Species Released: Pholletesor pedias

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION I -INTRODUCED PARASITES AND PREDATORS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host/Prey Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It; Followed by Summary of Target Host/Prey Arranged Alphabetically by Common Name

Family of Host/Prey: Lymantriidae

Host/Prey Genus, species, author: Lymantria dispar (Linnaeus)

Common name of host/prey: gypsy moth

Species Released: Aleiodes lymantriae

Compsilura concinnata

Glyptapanteles flavicoxis

Hyposoter lymantriae

Steinernema feltiae

Anastatus disparis

Cotesia melanoscelus

Glyptapanteles indiensis

Meteorus pulchricornis

Family of Host/Prey: Noctuidae

Host/Prey Genus, species, author: Anticarsia gemmatalis Hübner

Common name of host/prey: velvetbean caterpillar

Species Released: Microcharops anticarsiae

Zelomorpha sp.

Host/Prey Genus, species, author: Helicoverpa zea (Boddie)

Common name of host/prey: corn earworm, bollworm

Species Released: Microplitis demolitor

Trichogramma pretiosum

Host/Prey Genus, species, author: Heliothis virescens (Fabricius)

Common name of host/prey: tobacco budworm

Species Released: Microplitis demolitor

Trichogramma pretiosum

Palexorista laxa

Host/Prey Genus, species, author: Pseudoplusia includens (Walker)

Common name of host/prey: soybean looper

Species Released: Cotesia ruficrus

Host/Prey Genus, species, author: Spodoptera exigua (Hübner)

Common name of host/prey: beet armyworm

Species Released: Telenomus solitus

Host/Prey Genus, species, author: Spodoptera frugiperda (J.E.Smith)

Common name of host/prey: fall armyworm

Species Released: Microplitis rufiventris

Family of Host/Prey: Pieridae

Host/Prey Genus, species, author: Pieris rapae (Linnaeus)

Common name of host/prey: imported cabbageworm

Species Released: Cotesia rubecula

Hyposoter ebeninus

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION I - INTRODUCED PARASITES AND PREDATORS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host/Prey Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It; Followed by Summary of Target Host/Prey Arranged Alphabetically by Common Name

Family of Host/Prey: Plutellidae

Host/Prey Genus, species, author: *Plutella xylostella* (Linnaeus)

Common name of host/prey: diamondback moth

Species Released: *Cotesia plutellae*

Diadromus collaris

Family of Host/Prey: Pyralidae

Host/Prey Genus, species, author: *Amyelois transitella* (Walker)

Common name of host/prey: navel orangeworm

Species Released: *Goniozus legneri*

Scambus simulator

Trichogrammatoidea annulata

Host/Prey Genus, species, author: *Ectomyelois ceratoniae* (Zeller)

Common name of host/prey: carob moth

Species Released: *Goniozus legneri*

Family of Host/Prey: Saturniidae

Host/Prey Genus, species, author: *Hemileuca oliviae* Cockerell

Common name of host/prey: range caterpillar

Species Released: *Brachymeria intermedia*

Brachymeria lasus

Pimpla disparis

Family of Host/Prey: Tortricidae

Host/Prey Genus, species, author: *Choristoneura fumiferana* (Clemens)

Common name of host/prey: spruce budworm

Species Released: *Ancistrocerus catskill*

Ancistrocerus tuberculocephalus

Euodynerus hidalgo

Euodynerus leucomelas

Host/Prey Genus, species, author: *Cydia pomonella* (Linnaeus)

Common name of host/prey: codling moth

Species Released: *Trichogrammatoidea annulata*

Host/Prey Genus, species, author: *Rhyacionia frustrana* (Comstock)

Common name of host/prey: Nantucket pine tip moth

Species Released: *Campoplex frustranae*

Family of Host/Prey: Zygaenidae

Host/Prey Genus, species, author: *Harrisina brillians* Barnes & McDunnough

Common name of host/prey: western grapeleaf skeletonizer

Species Released: *Ametadoria misella*

Glyptapanteles harrisinae

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION I -INTRODUCED PARASITES AND PREDATORS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host/Prey Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It; Followed by Summary of Target Host/Prey Arranged Alphabetically by Common Name

Order of Host/Prey: Orthoptera

Family of Host/Prey: Gryllotalpidae

Host/Prey Genus, species, author: Scapteriscus borellii Giglio-Tos

Common name of host/prey: southern mole cricket

Species Released: Larra bicolor

Host/Prey Genus, species, author: Scapteriscus vicinus Scudder

Common name of host/prey: tawny mole cricket

Species Released: Larra bicolor

Order of Host/Prey: Thysanoptera

Family of Host/Prey: Thripidae

Host/Prey Genus, species, author: Heliothrips haemorrhoidalis (Bouché)

Common name of host/prey: greenhouse thrips

Species Released: Goetheana parvipennis

Common Name	Genus-species	Order:Family
--	aphids	Homoptera:Aphididae
--	aphids, pecan	Homoptera:Aphididae
--	Crioceris spp.	Coleoptera:Chrysomelidae
--	Pseudaulacaspis prunicola	Homoptera:Diaspididae
alfalfa plant bug	Adelphocoris lineolatus	Heteroptera:Miridae
alfalfa weevil	Hypera postica	Coleoptera:Curculionidae
apple blotch leafminer	Phyllonorycter crataegella	Lepidoptera:Gracillariidae
asparagus beetle	Crioceris asparagi	Coleoptera:Chrysomelidae
avocado brown mite	Oligonychus punicae	Acariformes:Tetranychidae
beet armyworm	Spodoptera exigua	Lepidoptera:Noctuidae
black scale	Saissetia oleae	Homoptera:Coccidae
blue alfalfa aphid	Acyrtosiphon kondoi	Homoptera:Aphididae
boll weevil	Anthonomus grandis	Coleoptera:Curculionidae
brownbanded cockroach	Supella longipalpa	Blattodea:Blattellidae
Caribbean fruit fly	Anastrepha suspensa	Diptera:Tephritidae
carmine spider mite	Tetranychus cinnabarinus	Acariformes:Tetranychidae
carob moth	Ectomyelois ceratoniae	Lepidoptera:Pyrilidae
cereal leaf beetle	Oulema melanopus	Coleoptera:Chrysomelidae
citrus red mite	Panonychus citri	Acariformes:Tetranychidae
citrus whitefly	Dialeurodes citri	Homoptera:Aleyrodidae
clover root curculio	Sitona hispidulus	Coleoptera:Curculionidae

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION I -INTRODUCED PARASITES AND PREDATORS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host/Prey Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It; Followed by Summary of Target Host/Prey Arranged Alphabetically by Common Name

Common Name	Genus-species	Order:Family
codling moth	<i>Cydia pomonella</i>	Lepidoptera:Tortricidae
Colorado potato beetle	<i>Leptinotarsa decemlineata</i>	Coleoptera:Chrysomelidae
corn earworm, bollworm	<i>Helicoverpa zea</i>	Lepidoptera:Noctuidae
diamondback moth	<i>Plutella xylostella</i>	Lepidoptera:Plutellidae
driedfruit beetle	<i>Carpophilus hemipterus</i>	Coleoptera:Nitidulidae
Egyptian alfalfa weevil	<i>Hypera brunniipennis</i>	Coleoptera:Curculionidae
elm leaf beetle	<i>Xanthogaleruca luteola</i>	Coleoptera:Chrysomelidae
euonymus scale	<i>Unaspis euonymi</i>	Homoptera:Diaspididae
fall armyworm	<i>Spodoptera frugiperda</i>	Lepidoptera:Noctuidae
fall webworm	<i>Hyphantria cunea</i>	Lepidoptera:Arctiidae
greenbug	<i>Schizaphis graminum</i>	Homoptera:Aphididae
greenhouse thrips	<i>Heliothrips haemorrhoidalis</i>	Thysanoptera:Thripidae
greenhouse whitefly	<i>Trialeurodes vaporariorum</i>	Homoptera:Aleyrodidae
gypsy moth	<i>Lymantria dispar</i>	Lepidoptera:Lymantriidae
horn fly	<i>Haematobia irritans</i>	Diptera:Muscidae
house fly	<i>Musca domestica</i>	Diptera:Muscidae
ice plant scale	<i>Pulvinaria mesembryanthemi</i>	Homoptera:Coccidae
imported cabbageworm	<i>Pieris rapae</i>	Lepidoptera:Pieridae
Japanese bayberry whitefly	<i>Parabemisia myricae</i>	Homoptera:Aleyrodidae
Japanese beetle	<i>Popillia japonica</i>	Coleoptera:Scarabaeidae
larch casebearer	<i>Coleophora laricella</i>	Lepidoptera:Coleophoridae
large walnut aphid	<i>Callaphis juglandis</i>	Homoptera:Aphididae
leafminer	<i>Liriomyza trifolii</i>	Diptera:Agromyzidae
Mediterranean fruit fly	<i>Ceratitis capitata</i>	Diptera:Tephritidae
melon fly	<i>Dacus cucurbitae</i>	Diptera:Tephritidae
Mexican bean beetle	<i>Epilachna varivestis</i>	Coleoptera:Coccinellidae
Mexican rice borer	<i>Eoreuma loftini</i>	Lepidoptera:Crambidae
Nantucket pine tip moth	<i>Rhyacionia frustrana</i>	Lepidoptera:Tortricidae
navel orangeworm	<i>Amyelois transitella</i>	Lepidoptera:Pyrilidae
orange spiny whietfly	<i>Aleurocanthus spiniferus</i>	Homoptera:Aleyrodidae
Oriental fruit fly	<i>Dacus dorsalis</i>	Diptera:Tephritidae
pea aphid	<i>Acyrtosiphon pisum</i>	Homoptera:Aphididae
pear psylla	<i>Cacopsylla pyricola</i>	Homoptera:Psyllidae
pineapple souring beetle	<i>Carpophilus humeralis</i>	Coleoptera:Nitidulidae
pink bollworm	<i>Pectinophora gossypiella</i>	Lepidoptera:Gelechiidae
plant bugs	<i>Lygus spp.</i>	Heteroptera:Miridae
potato leafhopper	<i>Empoasca fabae</i>	Homoptera:Cicadellidae
range caterpillar	<i>Hemileuca oliviae</i>	Lepidoptera:Saturniidae
red pine scale	<i>Matsucoccus resinosae</i>	Homoptera:Margarodidae

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION I -INTRODUCED PARASITES AND PREDATORS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host/Prey Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It; Followed by Summary of Target Host/Prey Arranged Alphabetically by Common Name

Common Name	Genus-species	Order:Family
southern green stink bug	Nezara viridula	Heteroptera:Pentatomidae
southern mole cricket	Scapteriscus borellii	Orthoptera:Gryllotalpidae
soybean looper	Pseudoplusia includens	Lepidoptera:Noctuidae
spiraling whitefly	Aleurodicus dispersus	Homoptera:Aleyrodidae
spotted asparagus beetle	Crioceris duodecimpunctata	Coleoptera:Chrysomelidae
spotted tentiform leafminer	Phyllonorycter blancardella	Lepidoptera:Gracillariidae
spruce budworm	Choristoneura fumiferana	Lepidoptera:Tortricidae
stable fly	Stomoxys calcitrans	Diptera:Muscidae
sugarcane delphacid	Perkinsiella saccharicida	Homoptera:Delphacidae
tarnished plant bug	Lygus lineolaris	Heteroptera:Miridae
tawny mole cricket	Scapteriscus vicinus	Orthoptera:Gryllotalpidae
tobacco budworm	Heliothis virescens	Lepidoptera:Noctuidae
tomato pinworm	Keiferia lycopersicella	Lepidoptera:Gelechiidae
twospotted spider mite	Tetranychus urticae	Acariformes:Tetranychidae
vegetable leafminer	Liriomyza sativae	Diptera:Agromyzidae
velvetbean caterpillar	Anticarsia gemmatilis	Lepidoptera:Noctuidae
walnut husk fly	Rhagoletis completa	Diptera:Tephritidae
western grapeleaf skeletonizer	Harrisina brillians	Lepidoptera:Zygaenidae
western tarnished plant bug	Lygus hesperus	Heteroptera:Miridae
woolly whitefly	Aleurothrixus floccosus	Homoptera:Aleyrodidae

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION II - INTRODUCED WEED CONTROL AGENTS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It; Followed by Summary of Target Hosts Arranged Alphabetically by Common Name

Class: Liliopsida

Order of Host: Liliales

Family of Host: Pontederiaceae

Host Genus, species, author: Eichhornia crassipes (Mart.) Solms

Common name of host: waterhyacinth

Species Released: Neochetina bruchi

Neochetina eichhorniae

Sameodes albiguttalis

Class: Magnoliopsida

Order of Host: Asterales

Family of Host: Asteraceae

Host Genus, species, author: Carduus acanthoides L.

Common name of host: plumeless thistle

Species Released: Rhinocyllus conicus

Trichosirocalus horridus

Host Genus, species, author: Carduus nutans leiophyllus (Petr.) Stoj. & Stef.

Common name of host: musk/nodding thistle

Species Released: Rhinocyllus conicus

Trichosirocalus horridus

Host Genus, species, author: Carduus pycnocephalus L.

Common name of host: Italian thistle

Species Released: Rhinocyllus conicus

Host Genus, species, author: Centaurea diffusa Lam.

Common name of host: diffuse knapweed

Species Released: Sphenoptera jugoslavica

Urophora affinis

Urophora quadrifasciata

Host Genus, species, author: Centaurea maculosa Lam.

Common name of host: spotted knapweed

Species Released: Metzneria paucipunctella

Urophora affinis

Urophora quadrifasciata

Host Genus, species, author: Chondrilla juncea L.

Common name of host: rush skeletonweed

Species Released: Aceria chondrillae

[See also Section III, p. 19, for releases of introduced microbial organism against this species]

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION II - INTRODUCED WEED CONTROL AGENTS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It;
Followed by Summary of Target Hosts Arranged Alphabetically by Common Name

Family of Host: Asteraceae (continued)

Host Genus, species, author: *Cirsium arvense* (L.) Scop.

Common name of host: Canada thistle

Species Released: *Hadroplontus litura*

Urophora cardui

Host Genus, species, author: *Cirsium vulgare* (Savi) Ten.

Common name of host: bull thistle

Species Released: *Urophora stylata*

Host Genus, species, author: *Senecio jacobaea* L.

Common name of host: tansy ragwort

Species Released: *Botanophila seneciella*

Longitarsus jacobaeae

Tyria jacobaeae

Host Genus, species, author: *Silybum marianum* (L.) Gaertn.

Common name of host: milk thistle

Species Released: *Rhinocyllus conicus*

Order of Host: Caryophyllales

Family of Host: Amaranthaceae

Host Genus, species, author: *Alternanthera philoxeroides* (C. Mart.) Griseb.

Common name of host: alligatorweed

Species Released: *Agasicles hygrophila*

Amynothrips andersoni

Host Genus, species, author: *Salsola australis* R. Br.

Common name of host: Russian thistle

Species Released: *Coleophora klimeschiella*

Order of Host: Euphorbiales

Family of Host: Euphorbiaceae

Host Genus, species, author: *Euphorbia cyparissias* L.

Common name of host: cypress spurge

Species Released: *Hyles euphorbiae*

Host Genus, species, author: *Euphorbia esula* L.

Common name of host: leafy spurge

Species Released: *Hyles euphorbiae*

Oberea erythrocephala

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION II - INTRODUCED WEED CONTROL AGENTS RELEASED IN U.S. AND TERRITORIES - 1983

PART B - Target Host Arranged Alphabetically by Class, Order, Family, Genus, Species with Alphabetical List of Introduced Beneficial Species Released Against It;
Followed by Summary of Target Hosts Arranged Alphabetically by Common Name

Order of Host: Fabales

Family of Host: Fabaceae

Host Genus, species, author: *Cytisus scoparius* (L.) Link

Common name of host: Scotch broom

Species Released: *Apion fuscirostre*

Order of Host: Lamiales

Family of Host: Lamiaceae

Host Genus, species, author: *Salvia aethiopis* L.

Common name of host: Mediterranean sage

Species Released: *Phrydiuchus tau*

Order of Host: Sapindales

Family of Host: Zygophyllaceae

Host Genus, species, author: *Tribulus terrestris* L.

Common name of host: puncturevine

Species Released: *Microlearinus lareynii*

Microlearinus spp.

Microlearinus lypriformis

Order of Host: Scrophulariales

Family of Host: Scrophulariaceae

Host Genus, species, author: *Linaria dalmatica* (L.) Mill.

Common name of host: Dalmatian toadflax

Species Released: *Calophasia lunula*

Host Genus, species, author: *Linaria vulgaris* Miller

Common name of host: yellow toadflax

Species Released: *Calophasia lunula*

Order of Host: Theales

Family of Host: Clusiaceae

Host Genus, species, author: *Hypericum perforatum* L.

Common name of host: common St. Johnswort

Species Released: *Chrysolina quadrigemina*

Zeuxidiplosis giardi

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION II - INTRODUCED WEED CONTROL AGENTS RELEASED IN U.S. AND TERRITORIES - 1983

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Common Name	Genus-species	Order:Family
alligatorweed	Alternanthera philoxeroides	Caryophyllales:Amaranthaceae
bull thistle	Cirsium vulgare	Asterales:Asteraceae
Canada thistle	Cirsium arvense	Asterales:Asteraceae
common St. Johnswort	Hypericum perforatum	Theales:Clusiaceae
cypress spurge	Euphorbia cyparissias	Euphorbiales:Euphorbiaceae
Dalmatian toadflax	Linaria dalmatica	Scrophulariales:Scrophulariaceae
diffuse knapweed	Centaurea diffusa	Asterales:Asteraceae
Italian thistle	Carduus pycnocephalus	Asterales:Asteraceae
leafy spurge	Euphorbia esula	Euphorbiales:Euphorbiaceae
Mediterranean sage	Salvia aethiopis	Lamiales:Lamiaceae
milk thistle	Silybum marianum	Asterales:Asteraceae
musk/nodding thistle	Carduus nutans leiophyllus	Asterales:Asteraceae
plumeless thistle	Carduus acanthoides	Asterales:Asteraceae
puncturevine	Tribulus terrestris	Sapindales:Zygophyllaceae
rush skeletonweed	Chondrilla juncea	Asterales:Asteraceae
Russian thistle	Salsola australis	Caryophyllales:Chenopodiaceae
Scotch broom	Cytisus scoparius	Fabales:Fabaceae
spotted knapweed	Centaurea maculosa	Asterales:Asteraceae
tansy ragwort	Senecio jacobaea	Asterales:Asteraceae
waterhyacinth	Eichhornia crassipes	Liliales:Pontederiaceae
yellow toadflax	Linaria vulgaris	Scrophulariales:Scrophulariaceae

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION III - LIST OF INTRODUCED MICROBIAL ORGANISMS RELEASED IN U.S. AND TERRITORIES - 1983

Arranged Alphabetically by Genus-species of Released Organism, State, County

Species Released Genus Species, Subsp. Author Order, Family	Origin Country, State, Co. Facilities	Released - State, County No. of Sites Month /SEE NOTES	File Number Releaser Facil., Name * = Specimens Kept	Target Host (at time of release) Genus Species, Subsp. Author, Common Name
Paecilomyces lilacinus (Thom) Samson Moniliales	Peru PEIPC	FL Alachua May NOTE: 078 2	UFG-GCS-83-0001 UFG Dube, B Smart, G C	Meloidogyne incognita (Kofoed & White) Chitwood 1949 southern root-knot nematode
Puccinia chondrillina Bubak & Sydenham Uredinales Pucciniaceae	WA, Spokane WASU/GLP	WA Klickitat ? e SPORES 1 Jul NOTE: 125	WASU-GLP-83-0003-3 WASU Gorman, B	Chondrilla juncea Linnaeus rush skeletonweed
	WA, Spokane WASU/GLP	WA Spokane ? e SPORES 13 Jun to Jul NOTE: 125	WASU-GLP-83-0003-1 WASU Piper, G L	SAME
	WA, Spokane WASU/GLP	WA Stevens ? e SPORES 1 Jul NOTE: 125	WASU-GLP-83-0003-2 WASU Chambreau, D	SAME
	WA, Spokane WASU/GLP	WA Whitman ? e SPORES 1 Aug NOTE: 125	WASU-GLP-83-0003-4 WASU Piper, G l	SAME
Oryctes rhinoceros NOV	Western Samoa WS	PW Peleliou I ? e DHA ? NOTE: 129	PWDEC-HA-83-0001 PWDEC Adelbei, H	Oryctes rhinoceros (Linnaeus) coconut rhinoceros beetle
Baculoviridae				

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION III - LIST OF INTRODUCED MICROBIAL ORGANISMS RELEASED IN U.S. AND TERRITORIES - 1983
Arranged Alphabetically by Genus-species of Released Organism, State, County

NOTES

078 Inoculum (isolate CIP-1) released on wheat seed, in some plots with the bacterium Pasteuria penetrans (Thorne) Sayre. See Dube, B, and G C Smart, Jour. Nematol. 19: 222-227, 1987.

125 Approximately 8 billion spores were released in the 4 counties (7 billion in Spokane County), teste G L Piper, WASU.

129 Information from I Schreiner, 1989 (Haw. Entomol. Soc. Proc. 29: 57-69), and D M Nafus, GUUG, pers. commun., 1993.

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION IV - INTRODUCED POLLINATORS AND OTHER BENEFICIAL SPECIES RELEASED IN U.S. AND TERRITORIES - 1983
Arranged Alphabetically by Genus-species of Released Organism, State, County

Species Released Genus Species, Subsp. Author Order, Family	Origin Country, State/Prov, Co Facilities Collector Acronym/ Initials	Released - State, County Total, Stage No. of Sites Month /SEE NOTES	File Number Releaser Acronym, Name * = Specimens Kept	Target (at time of release)
Chalicodoma nigripes (Spinola) Hymenoptera Megachilidae	Egypt EGCU/SER	NV Clark 398 A 1 May	BBSL-83-0002 BBSL Parker, F D	alfalfa
Euoniticellus intermedius (Reiche) Coleoptera Scarabaeidae	USA, CA (ex South Africa) UCDC	TX Brazos 432 A 1 Apr	VTERL-GTF-83-0001-1 VTERL Fincher, G T	cattle dung & horn fly
	USA, CA (ex South Africa) UCDC	TX Grimes 1330 A 1 Apr to Sep	VTERL-GTF-83-0001-2 VTERL Fincher, G T	SAME
Onitis alexis Klug Coleoptera Scarabaeidae	USA, CA (ex South Africa) UCDEXT	TX Brazos 40 A 1 Oct	VTERL-GTF-83-0003-2 VTERL Fincher, G T	SAME
	USA, CA (ex South Africa) UCDEXT	TX Grimes 124 A 1 Apr	VTERL-GTF-83-0003-1 VTERL Fincher, G T	SAME
Onthophagus bonasus (Fabricius) Coleoptera Scarabaeidae	Pakistan VTERL	TX Grimes 342 A 1 Apr to Sep	VTERL-GTF-83-0002 VTERL Fincher, G T	SAME
Onthophagus taurus Schreber Coleoptera Scarabaeidae	USA-GA (orig. Europe) VTERL	TX Grimes 440 A 1 Apr	VTERL-GTF-83-0004 VTERL Fincher, G T	SAME

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION IV - INTRODUCED POLLINATORS AND OTHER BENEFICIAL SPECIES RELEASED IN U.S. AND TERRITORIES - 1983
Arranged Alphabetically by Genus-species of Released Organism, State, County

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Osmia cornifrons (Radoszkowski) Hymenoptera Megachilidae	MD, Prince Georges BIIL/SWTB	AK South Central 200e A 1 Mar NOTE: 020	BIIL-SWTB-83-0016 COMAKGI	fruit & flower trees
	MD, Prince Georges BIIL/SWTB	AR Newton 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0007 AREK Kindberg, E	?apple
	MD, Prince Georges BIIL/SWTB	CA Glenn 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0023 CADC Chapla, D	SAME
	MD, Prince Georges BIIL/SWTB	CT Middlesex 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0026 CTRAJ Jansson, R A	SAME
	MD, Prince Georges BIIL/SWTB	IA Story 200e A 1 Jan	BIIL-SWTB-83-0006 IARBW Wilcox, R B	apple
	MD, Prince Georges BIIL/SWTB	ID Bonner 200e A 1 Apr	BIIL-SWTB-83-0015 IDLR Rosenvold, L	apple, other fruit
	MD, Prince Georges BIIL/SWTB	IL Du Page 200e A 1 Apr	BIIL-SWTB-83-0018 ILRK Kurle, R	SAME
	MD, Prince Georges BIIL/SWTB	IL Stark 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0025 ILDO Owens, D	?apple

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION IV - INTRODUCED POLLINATORS AND OTHER BENEFICIAL SPECIES RELEASED IN U.S. AND TERRITORIES - 1983

Arranged Alphabetically by Genus-species of Released Organism, State, County

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Osmia cornifrons (Radoszkowski) Hymenoptera Megachilidae	MD, Prince Georges BIIL/SWTB	IN Porter 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0012 INEW Winquist, E	?apple
	MD, Prince Georges BIIL/SWTB	KS Crawford 200e A 1 Apr	BIIL-SWTB-82-0057 KSDWH Hight, D W	apple, pear
	MD, Prince Georges BIIL/SWTB	MA Plymouth 200e A 1 Apr	BIIL-SWTB-83-0002 MARJB Bjornson, R J	apple
	MD, Prince Georges BIIL/SWTB	MD Howard 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0008 MDCMS Stretmater, C M	?apple
	MD, Prince Georges BIIL/SWTB	MD Prince Georges 6800e A 17 Mar	BIIL-SWTB-83-0033 BIIL Batra, S W T	various
	MD, Prince Georges BIIL/SWTB	MI Lewanee 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0019 MIJA Aument, J	?apple
	MD, Prince Georges BIIL/SWTB	MI Oakland 200e A 1 Apr	BIIL-SWTB-83-0021 MIWHM Mack, W H	magnolia, fruit trees
	MD, Prine Georges BIIL/SWTB	MI Sanilac 200e A 1 Jan	BIIL-SWTB-83-0020 MIHK Kozerski, H	?apple

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION IV - INTRODUCED POLLINATORS AND OTHER BENEFICIAL SPECIES RELEASED IN U.S. AND TERRITORIES - 1983
Arranged Alphabetically by Genus-species of Released Organism, State, County

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Osmia cornifrons (Radoszkowski) Hymenoptera Megachilidae	MD, Prince Georges BIIL/SWTB	NY Suffolk 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0017 NYWAC Cahill, W A	?apple
	MD, Prince Georges BIIL/SWTB	NY Wayne 200e A 1 May	BIIL-SWTB-83-0014 NYDES Sharp, D E	apple
	MD, Prince Georges BIIL/SWTB	OH Franklin 200e A 1 Apr	BIIL-SWTB-83-0005 OHRHA Alexander, R H	cherry (sour), apple
	MD, Prince Georges BIIL/SWTB	OH Morrow 400e A 1 Feb NOTE: 076	BIIL-SWTB-83-0028 OHBH Hicks, B	?apple
	MD, Prince Georges BIIL/SWTB	OH Perry 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0013 OHWPE Earwood, W P	?apple
	MD, Prince Georges BIIL/SWTB	OR Clackamas 200e A 1 Apr	BIIL-SWTB-83-0010 ORBLP Pope, B L	apple
	MD, Prince Georges BIIL/SWTB	OR Jackson 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0011 ORGT Tiger, G	?apple
	MD, Prince Georges BIIL/SWTB	OR Linn 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0009 OREXTLC Ross, E V	SAME

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION IV - INTRODUCED POLLINATORS AND OTHER BENEFICIAL SPECIES RELEASED IN U.S. AND TERRITORIES - 1983
Arranged Alphabetically by Genus-species of Released Organism, State, County

Species Released Genus Species, Subsp. Author Order, Family	Origin Country, State/Prov, Co Facilities Collector Acronym/ Initials	Released - State, County Total, Stage No. of Sites Month /SEE NOTES	File Number Releaser Acronym, Name * = Specimens Kept	Target (at time of release)
Osmia cornifrons (Radoszkowski) Hymenoptera Megachilidae	MD, Prince Georges BIIL/SWTB	OR Malheur 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0024 ORJS Simpson, J	?apple
	MD, Prince Georges BIIL/SWTB	OR Washington 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0001 ORDC Collins, D	SAME
	MD, Prince Georges BIIL/SWTB	PA Bucks 200e A 2 Apr	BIIL-SWTB-83-0027 PAEMS Swisher, E M	plum, peach, cherry
	MD, Prince Georges BIIL/SWTB	PA Franklin 200e A 1 Apr	BIIL-SWTB-83-0003 PADLH Hess, D L	apple
	MD, Prince Georges BIIL/SWTB	PA Lawrence 200e A 1 Jan NOTE: 076	BIIL-SWTB-83-0022 PAKC Cowher, K	?apple
	MD, Prince Georges BIIL/SWTB	PA Lebanon 200e A 1 Apr	BIIL-SWTB-83-0004 PADP Piergallini, D	apricot
	MD, Prince Georges BIIL/SWTB	WV Jefferson 400e A 1 Mar	BIIL-SWTB-83-0031 BIIL Batra, S W T	apple
Osmia cornuta Latreille Hymenoptera Megachilidae	Spain SPINIAV/EA	UT Cache 351 A 1 May	BBSL-83-0001 BBSL Torchio, P F	SAME

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION IV - INTRODUCED POLLINATORS AND OTHER BENEFICIAL SPECIES RELEASED IN U.S. AND TERRITORIES - 1983
Arranged Alphabetically by Genus-species of Released Organism, State, County

NOTES

020 Greenhouse release.

076 Actual release is assumed, but not documented.

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION V - SPECIES OF INTRODUCED BENEFICIAL ORGANISMS (EXCLUDING PLANTS) RELEASED IN U.S. AND TERRITORIES - 1983
Arranged Alphabetically by Class, Order, Family, Genus, Species, with Type of Organism and Target Species

Beneficial Organisms	Targets (Common name, Genus, Species)
PHYLUM: NEMATODA	
Class: Secernentia	
Order: Rhabditida	
Family: Steinernematidae	
Steinernema carpocapsae (Weiser, 1955) PA	Mediterranean fruit fly, Ceratitis capitata
Steinernema feltiae (Filipjev, 1934) PA	gypsy moth, Lymantria dispar
PHYLUM: ARTHROPODA	
Class: Arachnida (Acari)	
Order: Acariformes	
Family: Eriophyidae	
Aceria chondrillae (Canestrini) WE	rush skeletonweed, Chondrilla juncea
Family: Podapolipidae	
Coccipolipus epilachnae Smiley PA	Mexican bean beetle, Epilachna varivestis
Order: Parasitiformes	
Family: Phytoseiidae	
Amblyseius limonicus Garman & McGregor PR	citrus red mite, Panonychus citri
Amblyseius longispinosus (Evans) PR	carmine spider mite, Tetranychus cinnabarinus
Amblyseius sp. PR	twospotted spider mite, Tetranychus urticae
Euseius concordis (Chant) PR	citrus red mite, Panonychus citri
Euseius fructicolus Gonzalez & Schuster PR	avocado brown mite, Oligonychus punicae
Euseius hibisci (Chant) PR	citrus red mite, Panonychus citri
Euseius quetzali McMurtry, Bad. & Congd. PR	citrus red mite, Panonychus citri
Euseius scutalis (Athias-Henriot) PR	avocado brown mite, Oligonychus punicae
Euseius sp. nr. citrifolius Denmark & Muma PR	citrus red mite, Panonychus citri
Euseius sp. nr. concordis (Chant) PR	avocado brown mite, Oligonychus punicae
Euseius stipulatus (Athias-Henriot) PR	citrus red mite, Panonychus citri
	avocado brown mite, Oligonychus punicae
	citrus red mite, Panonychus citri

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION V - SPECIES OF INTRODUCED BENEFICIAL ORGANISMS (EXCLUDING PLANTS) RELEASED IN U.S. AND TERRITORIES - 1983
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Beneficial Organisms	Targets (Common name, Genus, Species)
Family: Phytoseiidae (continued)	
Euseius vivax (Chant and Baker) PR	avocado brown mite, Oligonychus punicae citrus red mite, Panonychus citri
Galendromus annectens (DeLeon) PR	avocado brown mite, Oligonychus punicae citrus red mite, Panonychus citri
Galendromus occidentalis (Nesbitt) PR	avocado brown mite, Oligonychus punicae carmine spider mite, Tetranychus cinnabarinus
Galendromus porresi (McMurtry) PR	avocado brown mite, Oligonychus punicae citrus red mite, Panonychus citri
Iphiseius degenerans (Berlese) PR	avocado brown mite, Oligonychus punicae
Neoseiulus californicus (McGregor) PR	avocado brown mite, Oligonychus punicae carmine spider mite, Tetranychus cinnabarinus citrus red mite, Panonychus citri
Phytoseiulus macropilis (Banks) PR	avocado brown mite, Oligonychus punicae
Phytoseiulus persimilis Athias-Henriot PR	twospotted spider mite, Tetranychus urticae
Phytoseius hawaiiensis Prasad PR	avocado brown mite, Oligonychus punicae citrus red mite, Panonychus citri
Typhlodromips sp. nr. tunis (Athias-Henriot) PR	avocado brown mite, Oligonychus punicae citrus red mite, Panonychus citri
Typhlodromips swirskii (Athias-Henriot) PR	citrus red mite, Panonychus citri
Typhlodromus cornus DeLeon PR	citrus red mite, Panonychus citri
Typhlodromus rickeri Chant PR	avocado brown mite, Oligonychus punicae citrus red mite, Panonychus citri
Typhlodromus tiliae Oudemans PR	avocado brown mite, Oligonychus punicae citrus red mite, Panonychus citri
Class: Insecta	
Order: Coleoptera	
Family: BUPRESTIDAE	
Sphenoptera jugoslavica Obenberger WE	diffuse knapweed, Centaurea diffusa
Family: CERAMBYCIDAE	
Oberea erythrocephala (Schrank) WE	leafy spurge, Euphorbia esula
Family: CHRYSOMELIDAE	
Agasicles hygrophila Selman & Vogt WE	alligatorweed, Alternanthera philoxeroides
Chrysolina quadrigemina (Suffrian) WE	common St. Johnswort, Hypericum perforatum
Longitarsus jacobaeae (Waterhouse) WE	tansy ragwort, Senecio jacobaea

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION V - SPECIES OF INTRODUCED BENEFICIAL ORGANISMS (EXCLUDING PLANTS) RELEASED IN U.S. AND TERRITORIES - 1983
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Beneficial Organisms	Targets (Common name, Genus, Species)
Family: Coccinellidae	
Coccinella septempunctata Linnaeus PR	aphids
Delphastus pusillus (LeConte) PR	spiraling whitefly, Aleurodicus dispersus
Exochomus flavipes (Thunberg) PR	--, Pulvinaria delottoi Gill
Harmonia axyridis (Pallas) PR	ice plant scale, Pulvinaria mesembryanthemi
	aphids
	aphids, pecan
Hippodamia variegata (Goeze) PR	red pine scale, Matsucoccus resinosae
Hyperaspis senegalensis hottentota Mulsant PR	greenbug, Schizaphis graminum
Lioadalia flavomaculata (DeGeer) PR	--, Pulvinaria delottoi Gill
Menochilus sexmaculatus (Fabricius) PR	greenbug, Schizaphis graminum
Nephaspis bicolor Gordon PR	pear psylla, Cacopsylla pyricola
Nephaspis oculata (Blatchley) PR	spiraling whitefly, Aleurodicus dispersus
Scymnus sp. PR	spiraling whitefly, Aleurodicus dispersus
	twospotted spider mite, Tetranychus urticae
Family: Curculionidae	
Apion fuscirostre (Fabricius) WE	Scotch broom, Cytisus scoparius
Hadroplontus litura (Fabricius) WE	Canada thistle, Cirsium arvense
Microларinus lareynii (Jacquelin du Val) WE	puncture vine, Tribulus terrestris
Microларinus lypriformis (Wollaston) WE	puncture vine, Tribulus terrestris
Microларinus spp. WE	puncture vine, Tribulus terrestris
Neochetina bruchi Hustache WE	waterhyacinth, Eichhornia crassipes
Neochetina eichhorniae Warner WE	waterhyacinth, Eichhornia crassipes
Phrydiuchus tau Warner WE	Mediterranean sage, Salvia aethiopis
Rhinocyllus conicus (Froelich) WE	milk thistle, Silybum marianum
Trichosirocalus horridus (Panzer) WE	musk/nodding thistle, Carduus nutans leiophyllus
Family: Histeridae	
Atholus maindronii (Lewis) PR	horn fly, Haematobia irritans
	house fly, Musca domestica
Family: Nitidulidae	
Cybocephalus ?nipponicus Endrödy-Younga PR	euonymus scale, Unaspis euonymi
Family: Scarabaeidae	
Euoniticellus intermedius (Reiche) OT	see Section IV
Onitis alexis Klug OT	see Section IV
Onthophagus bonasus (Fabricius) OT	see Section IV
Onthophagus taurus Schreber OT	see Section IV

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION V - SPECIES OF INTRODUCED BENEFICIAL ORGANISMS (EXCLUDING PLANTS) RELEASED IN U.S. AND TERRITORIES - 1983
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Beneficial Organisms	Targets (Common name, Genus, Species)
Order: Diptera	
Family: Anthomyiidae	
<i>Botanophila seneciella</i> (Meade) WE	tansy ragwort, <i>Senecio jacobaea</i>
Family: Cecidomyiidae	
<i>Zeuxidiplosis giardi</i> (Kieffer) WE	common St. Johnswort, <i>Hypericum perforatum</i>
Family: Tachinidae	
<i>Ametadoria misella</i> (Wulp) PA	western grapeleaf skeletonizer, <i>Harrisina brillians</i>
<i>Compsilura concinnata</i> (Meigen) PA	gypsy moth, <i>Lymantria dispar</i>
	potential alternate lepidopterous hosts
<i>Erynniopsis antennata</i> (Rondani) PA	elm leaf beetle, <i>Xanthogaleruca luteola</i>
<i>Istocheta aldrichi</i> (Mesnil) PA	Japanese beetle, <i>Popillia japonica</i>
<i>Meigenia mutabilis</i> (Fallén) PA	asparagus beetle, <i>Crioceris asparagi</i>
	--, <i>Crioceris</i> spp.
<i>Palexorista laxa</i> (Curran) PA	tobacco budworm, <i>Heliothis virescens</i>
<i>Trichopoda pilipes</i> (Fabricius) PA	southern green stinkbug, <i>Nezara viridula</i>
Family: Tephritidae	
<i>Urophora affinis</i> (Frauenfeld) WE	diffuse knapweed, <i>Centaurea diffusa</i>
	spotted knapweed, <i>Centaurea maculosa</i>
<i>Urophora cardui</i> (Linnaeus) WE	Canada thistle, <i>Cirsium arvense</i>
<i>Urophora quadrifasciata</i> (Meigen) WE	diffuse knapweed, <i>Centaurea diffusa</i>
	spotted knapweed, <i>Centaurea maculosa</i>
<i>Urophora stylata</i> (Fabricius) WE	bull thistle, <i>Cirsium vulgare</i>
Order: Heteroptera	
Family: Anthocoridae	
<i>Anthocoris nemorum</i> (Linnaeus) PR	pear psylla, <i>Cacopsylla pyricola</i>
Family: Miridae	
<i>Tytthus mundulus</i> (Breddin) PR	sugarcane delphacid, <i>Perkinsiella saccharicida</i>
Family: Pentatomidae	
<i>Oplomus ebulinus</i> (Herrich-Schäffer) PR	Mexican bean beetle, <i>Epilachna varivestis</i>
Order: Hymenoptera	
Family: Aphelinidae	
<i>Coccophagus rusti</i> Compere PA	black scale, <i>Saissetia oleae</i>
<i>Encarsia ?haitiensis</i> Dozier PA	spiraling whitefly, <i>Aleurodicus dispersus</i>
<i>Encarsia citrina</i> (Crawford) PA	euonymus scale, <i>Unaspis euonymi</i>

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION V - SPECIES OF INTRODUCED BENEFICIAL ORGANISMS (EXCLUDING PLANTS) RELEASED IN U.S. AND TERRITORIES - 1983
Arranged Alphabetically by Class, Order, Family, Genus, Species, with Type of Organism and Target Species

Beneficial Organisms	Targets (Common name, Genus, Species)
Family: Aphelinidae (continued)	
Encarsia fasciata (Malenotti) PA	euonymus scale, Unaspis euonymi
Encarsia formosa Gahan PA	greenhouse whitefly, Trialeurodes vaporariorum
Encarsia lahorensis (Howard) PA	citrus whitefly, Dialeurodes citri
Encarsia n. sp. PA	Japanese bayberry whitefly, Parabemisia myricae
Encarsia n. sp. I Förster PA	Japanese bayberry whitefly, Parabemisia myricae
Encarsia smithi (Silvestri) PA	orange spiny whitefly, Aleurocanthus spiniferus
Encarsia sp. PA	spiraling whitefly, Aleurodicus dispersus
Eretmocerus n. sp. Haldeman PA	Japanese bayberry whitefly, Parabemisia myricae
Eretmocerus sp. PA	woolly whitefly, Aleurothrixus floccosus
Prococcophagus saissetiae Annecke & Mynhardt PA	black scale, Saissetia oleae
Pteroptrix n. sp. PA	euonymus scale, Unaspis euonymi
Family: Aphidiidae	
Aphidius colemani Viereck PA	greenbug, Schizaphis graminum
Aphidius eadyi Starý PA	blue alfalfa aphid, Acyrthosiphon kondoi
Aphidius ervi Haliday PA	blue alfalfa aphid, Acyrthosiphon kondoi
	pea aphid, Acyrthosiphon pisum
Aphidius smithi Sharma & Subba Rao PA	blue alfalfa aphid, Acyrthosiphon kondoi
Ephedrus plagiator (Nees) PA	greenbug, Schizaphis graminum
	pea aphid, Acyrthosiphon pisum
Praon callaphis Mackauer & Sullivan PA	large walnut aphid, Callaphis juglandis
Trioxys tenuicaudus Starý PA	--, Tinocallis platani
Family: Bethyilidae	
Goniozus legneri Gordh PA	carab moth, Ectomyelois ceratoniae
	navel orangeworm, Amyelois transitella
	pink bollworm, Pectinophora gossypiella
Family: Braconidae	
Aleiodes lymantriae (Watanabe) PA	fall webworm, Hyphantria cunea
	gypsy moth, Lymantria dispar
Allorhogas pyralophagus Marsh PA	Mexican rice borer, Eoreuma loftini
Biosteres sublaevis Wharton PA	walnut husk fly, Rhagoletis completa
Cotesia melanoscelus (Ratzeburg) PA	gypsy moth, Lymantria dispar
Cotesia plutellae (Kurdjumov) PA	diamondback moth, Plutella xylostella
Cotesia rubecula (Marshall) PA	imported cabbageworm, Pieris rapae
Cotesia ruficrus (Haliday) PA	soybean looper, Pseudoplusia includens
Diachasmimorpha longicaudatas (Ashmead) PA	Mediterranean fruit fly, Ceratitis capitata
Diachasmimorpha tryoni (Cameron) PA	Caribbean fruit fly, Anastrepha suspensa
Glyptapanteles flavicoxis (Marsh) PA	gypsy moth, Lymantria dispar

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION V - SPECIES OF INTRODUCED BENEFICIAL ORGANISMS (EXCLUDING PLANTS) RELEASED IN U.S. AND TERRITORIES - 1983
Arranged Alphabetically by Class, Order, Family, Genus, Species, with Type of Organism and Target Species

Beneficial Organisms	Targets (Common name, Genus, Species)
Family: Braconidae (continued)	
Glyptapanteles harrisinae (Muesebeck) PA	western grapeleaf skeletonizer, Harrisina brillians
Glyptapanteles indiensis (Marsh) PA	gypsy moth, Lymantria dispar
Habrobracon gelechiae (Ashmead) PA	pink bollworm, Pectinophora gossypiella
Heterospilus annulatus Marsh PA	boll weevil, Anthonomus grandis
Heterospilus megalopus Marsh PA	boll weevil, Anthonomus grandis
Meteorus pulchricornis (Wesmael) PA	gypsy moth, Lymantria dispar
	potential alternate lepidopterous hosts
Microctonus aethiopoides Loan PA	alfalfa weevil, Hypera postica
	clover root curculio, Sitona hispidulus
Microctonus colesi Drea PA	Egyptian alfalfa weevil, Hypera brunniipennis
Microplitis demolitor (Wilkinson) PA	alfalfa weevil, Hypera postica
	corn earworm, bollworm, Helicoverpa zea
Microplitis rufiventris Kokujev PA	tobacco budworm, Heliothis virescens
Opius dissitus Muesebeck PA	fall armyworm, Spodoptera frugiperda
	leafminer, Liriomyza trifolii
Peristenus adelphocoridis Loan PA	vegetable leafminer, Liriomyza sativae
Peristenus digoneutis Loan PA	alfalfa plant bug, Adelphocoris lineolatus
	alfalfa plant bug, Adelphocoris lineolatus
	tarnished plant bug, Lygus lineolaris
Peristenus stygicus Loan PA	alfalfa plant bug, Adelphocoris lineolatus
	plant bugs, Lygus spp.
	tarnished plant bug, Lygus lineolaris
Pholetesor pedias (Nixon) PA	western tarnished plant bug, Lygus hesperus
Psytalia concolor (Szépligeti) PA	spotted tentiform leafminer, Phyllonorycter blancardella
Psytalia incisi (Silvestri) PA	Caribbean fruit fly, Anastrepha suspensa
	Caribbean fruit fly, Anastrepha suspensa
Rhaconotus roslinensis Lal PA	melon fly, Dacus cucurbitae
Zelomorpha sp. PA	Mexican rice borer, Eoreuma loftini
	velvetbean caterpillar, Anticarsia gemmatilis
Family: Chalcididae	
Brachymeria intermedia (Nees) PA	fall webworm, Hyphantria cunea
	range caterpillar, Hemileuca oliviae
Brachymeria lasus (Walker) PA	fall webworm, Hyphantria cunea
	range caterpillar, Hemileuca oliviae
Family: Diapriidae	
Trichopria stomoxydis Huggert PA	stable fly, Stomoxys calcitrans

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION V - SPECIES OF INTRODUCED BENEFICIAL ORGANISMS (EXCLUDING PLANTS) RELEASED IN U.S. AND TERRITORIES - 1983

Arranged Alphabetically by Class, Order, Family, Genus, Species, with Type of Organism and Target Species

Beneficial Organisms	Targets (Common name, Genus, Species)
Family: Encyrtidae	
Aloencyrtus saissetiae (Compere) PA	black scale, Saissetia oleae
Arrhenophagus albitibiae Girault PA	--, Pseudaulacaspis prunicola
Cerchysiella utilis (Noyes) PA	driedfruit beetle, Carpophilus hemipterus
Comperia merceti (Compere) PA	pineapple souring beetle, Carpophilus humeralis
Encyrtus saliens Prinsloo & Annecke PA	brownbanded cockroach, Supella longipalpa
Metaphycus funicularis Annecke PA	ice plant scale, Pulvinaria mesembryanthemi
	ice plant scale, Pulvinaria mesembryanthemi
	--, Pulvinaria delottoi
Metaphycus stramineus (Compere) PA	ice plant scale, Pulvinaria mesembryanthemi
	--, Pulvinaria delottoi
Prionomitus mitratus (Dalman) PA	pear psylla, Cacopsylla pyricola
Family: Eucoilidae	
Ganaspidium utilis Beardsley PA	leafminer, Liriomyza trifolii
	vegetable leafminer, Liriomyza sativae
Family: Eulophidae	
Chrysocharis caribea Bouček PA	leafminer, Liriomyza trifolii sativae
	vegetable leafminer, Liriomyza
Chrysocharis oscinidis Ashmead PA	leafminer, Liriomyza trifolii
	vegetable leafminer, Liriomyza sativae
Chrysonotomyia punctiventris (Crawford) PA	leafminer, Liriomyza trifolii
	vegetable leafminer, Liriomyza sativae
Diglyphus begini (Ashmead) PA	leafminer, Liriomyza trifolii
Edovum puttleri Grissell PA	Colorado potato beetle, Leptinotarsa decemlineata
Goetheana parvipennis (Gahan) PA	greenhouse thrips, Heliothrips haemorrhoidalis
Oomyzus gallerucae (Fonscolombe) PA	elm leaf beetle, Xanthogaleruca luteola
Oomyzus incertus (Ratzeburg) PA	alfalfa weevil, Hypera postica
Pediobius foveolatus (Crawford) PA	Mexican bean beetle, Epilachna varivestis
Pediobius furvus (Gahan) PA	Mexican riceborer, Eoreuma loftini
Tetrastichus coeruleus (Nees) PA	asparagus beetle, Crioceris asparagi
Tetrastichus crioceridis Graham PA	asparagus beetle, Crioceris asparagi
	spotted asparagus beetle, Crioceris duodecimpunctata
	--, Crioceris spp.
Tetrastichus julis (Walker) PA	cereal leaf beetle, Oulema melanopus
Family: Eupelmidae	
Anastatus disparis Ruschka PA	gypsy moth, Lymantria dispar

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION V - SPECIES OF INTRODUCED BENEFICIAL ORGANISMS (EXCLUDING PLANTS) RELEASED IN U.S. AND TERRITORIES - 1983
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Beneficial Organisms	Targets (Common name, Genus, Species)
Family: Ichneumonidae	
Bathyplectes anurus (Thomson) PA	alfalfa weevil, <i>Hypera postica</i> Egyptian alfalfa weevil, <i>Hypera brunnipennis</i>
Bathyplectes curculionis (Thomson) PA	alfalfa weevil, <i>Hypera postica</i>
Bathyplectes stenostigma (Thomson) PA	alfalfa weevil, <i>Hypera postica</i>
Campoplex frustranae Cushman PA	Nantucket pine tip moth, <i>Rhyacionia frustrana</i>
Campoplex n. sp. PA	tomato pinworm, <i>Keiferia lycopersicella</i>
Diadegma laricinellum (Strobl) PA	larch casebearer, <i>Coleophora laricella</i>
Diadromus collaris (Gravenhorst) PA	diamondback moth, <i>Plutella xylostella</i>
Diaparsis temporalis Horstmann PA	cereal leaf beetle, <i>Oulema melanopus</i>
Hyposoter ebeninus (Gravenhorst) PA	imported cabbageworm, <i>Pieris rapae</i>
Hyposoter lymantriae Cushman PA	gypsy moth, <i>Lymantria dispar</i>
Lemophagus crioceritor Aubert PA	asparagus beetle, <i>Crioceris asparagi</i>
Lemophagus curtus Townes PA	cereal leaf beetle, <i>Oulema melanopus</i>
Microcharops anticarsiae Gupta PA	velvetbean caterpillar, <i>Anticarsia gemmatalis</i>
Pimpla disparis Viereck PA	fall webworm, <i>Hyphantria cunea</i>
Scambus simulator Gupta & Tikar PA	range caterpillar, <i>Hemileuca oliviae</i> navel orangeworm, <i>Amyelois transitella</i>
Family: Megachilidae	
Chalicodoma nigripes (Spinola) PO	see Section IV
Osmia cornifrons (Radoszkowski) PO	see Section IV
Osmia cornuta Latreille PO	see Section IV
Family: Mymaridae	
Anagrus empoascae Dozier PA	potato leafhopper, <i>Empoasca fabae</i>
Anagrus flaveolus Waterhouse PA	potato leafhopper, <i>Empoasca fabae</i>
Anagrus giraulti Crawford PA	potato leafhopper, <i>Empoasca fabae</i>
Arescon enocki (Subba Rao & Kaur) PA	potato leafhopper, <i>Empoasca fabae</i>
Stethynium empoascae Subba Rao PA	alfalfa weevil, <i>Hypera postica</i> potato leafhopper, <i>Empoasca fabae</i>
Family: Pteromalidae	
Catolaccus grandis (Burks) PA	boll weevil, <i>Anthonomus grandis</i>
Dibrachoides dynastes (Förster) PA	alfalfa weevil, <i>Hypera postica</i>
Halticoptera circulus (Walker) PA	leafminer, <i>Liriomyza trifolii</i>
Muscidifurax zaraptor Kogan & Legner PA	vegetable leafminer, <i>Liriomyza sativae</i> house fly, <i>Musca domestica</i>

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION V - SPECIES OF INTRODUCED BENEFICIAL ORGANISMS (EXCLUDING PLANTS) RELEASED IN U.S. AND TERRITORIES - 1983
Arranged Alphabetically by Class, Order, Family, Genus, Species, with Type of Organism and Target Species

Beneficial Organisms	Targets (Common name, Genus, Species)
Family: Scelionidae	
Telenomus chloropus Thomson PA	southern green stinkbug, Nezara viridula
Telenomus solitus Johnson PA	beet armyworm, Spodoptera exigua
Trissolcus basalis (Wollaston) PA	southern green stinkbug, Nezara viridula
Family: Sphecidae	
Larra bicolor Fabricius PA	southern mole cricket, Scapteriscus borellii
	tawny mole cricket, Scapteriscus vicinus
Family: Trichogrammatidae	
Trichogramma pretiosum Riley PA	corn earworm, bollworm, Helicoverpa zea
	tobacco budworm, Heliothis virescens
Trichogrammatoidea annulata DeSantis PA	codling moth, Cydia pomonella
	navel orangeworm, Amyelois transitella
Family: Vespidae	
Ancistrocerus catskill (Saussure) PR	spruce budworm, Choristoneura fumiferana
Ancistrocerus tuberculocephalus (Saussure) PR	spruce budworm, Choristoneura fumiferana
Euodynerus hidalgo (Saussure) PR	spruce budworm, Choristoneura fumiferana
Euodynerus leucomelas (Saussure) PR	spruce budworm, Choristoneura fumiferana
Order: Lepidoptera	
Family: Arctiidae	
Tyria jacobaeae (Linnaeus) WE	tansy ragwort, Senecio jacobaea
Family: Coleophoridae	
Coleophora klimeschiella Toll WE	Russian thistle, Salsola australis
Family: Crambidae	
Sameodes albiguttalis (Warren) WE	waterhyacinth, Eichhornia crassipes
Family: Gelechiidae	
Metzneria paucipunctella Zeller WE	spotted knapweed, Centaurea maculosa
Family: Noctuidae	
Calophasia lunula (Hufnagel) WE	Dalmatian toadflax, Linaria dalmatica
	yellow toadflax, Linaria vulgaris
Family: Sphingidae	
Hyles euphorbiae (Linnaeus) WE	leafy spurge, Euphorbia esula
	cypress spurge, Euphorbia cyparissias

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION V - SPECIES OF INTRODUCED BENEFICIAL ORGANISMS (EXCLUDING PLANTS) RELEASED IN U.S. AND TERRITORIES - 1983
Arranged Alphabetically by Class, Order, Family, Genus, Species, with Type of Organism and Target Species

Beneficial Organisms	Targets (Common name, Genus, Species)
Order: Neuroptera Family: Chrysopidae Chrysoperla carnea (Stephens) PR	pear psylla, Cacopsylla pyricola
Order: Thysanoptera Family: Phlaeothripidae Amynothrips andersoni O'Neill WE	alligatorweed, Alternanthera philoxeroides
Family: Thripidae Scolothrips sexmaculatus (Pergande) PR	carmine spider mite, Tetranychus cinnabarinus
MICROBIAL ORGANISMS	
Insect Viruses Family: Baculoviridae Oryctes rhinoceros NOV	see Section III
Fungi	
Class: Basidiomycetes	
Order: Uredinales Family: Pucciniaceae Puccinia chondrillina Bubak & Sydenham MI	see Section III
Class: Hyphomycetes	
Order: Moniliales Family: Paecilomyces lilacinus (Thom) Samson MI	see Section III

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: AK

County: South Central

Genus-species: *Osmia cornifrons* PO

State: AL

County:

Genus-species: *Bathyplectes curculionis* PA
Microctonus colesi PA

County: Baldwin

Genus-species: *Agasicles hygrophila* WE

County: Bullock

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Coffee

Genus-species: *Bathyplectes anurus* PA
Encarsia lahorensis PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Conecuh

Genus-species: *Encarsia lahorensis* PA

County: Covington

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Dallas

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA

State: AL (continued)

County: Elmore

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

County: Etowah

Genus-species: *Bathyplectes anurus* PA

County: Fayette

Genus-species: *Bathyplectes anurus* PA

County: Hale

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA

County: Houston

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Encarsia lahorensis PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

County: Jackson

Genus-species: *Agasicles hygrophila* WE
Bathyplectes anurus PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Lauderdale

Genus-species: *Agasicles hygrophila* WE

County: Lawrence

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: AL (continued)

County: Marengo

Genus-species: Bathyplectes anurus PA
Dibrachoides dynastes PA

County: Marshall

Genus-species: Bathyplectes anurus PA

County: Mobile

Genus-species: Agasicles hygrophila WE

County: Montgomery

Genus-species: Bathyplectes anurus PA
Encarsia lahorensis PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Morgan

Genus-species: Bathyplectes anurus PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

County: Pike

Genus-species: Bathyplectes anurus PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: St Clair

Genus-species: Bathyplectes anurus PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA

County: Talladega

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA

State: AL (continued)

County: Tuscaloosa

Genus-species: Bathyplectes anurus PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA

State: AR

County:

Genus-species: Bathyplectes curculionis PA
Microctonus colesi PA

County: Ashley

Genus-species: Encarsia lahorensis PA

County: Bradley

Genus-species: Encarsia lahorensis PA

County: Calhoun

Genus-species: Encarsia lahorensis PA

County: Chicot

Genus-species: Encarsia lahorensis PA

County: Clark

Genus-species: Encarsia lahorensis PA

County: Cross

Genus-species: Bathyplectes anurus PA

County: Desha

Genus-species: Bathyplectes anurus PA

County: Howard

Genus-species: Encarsia lahorensis PA

County: Independence

Genus-species: Bathyplectes anurus PA

County: Jefferson

Genus-species: Encarsia lahorensis PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: AR (continued)

County: Lafayette

Genus-species: *Encarsia lahorensis* PA

County: Marion

Genus-species: *Bathyplectes anurus* PA

County: Miller

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

County: Newton

Genus-species: *Bathyplectes anurus* PA
Osmia cornifrons PO

County: Ouachita

Genus-species: *Encarsia lahorensis* PA

County: Phillips

Genus-species: *Bathyplectes anurus* PA

County: Pulaski

Genus-species: *Bathyplectes anurus* PA

County: Washington

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Oomyzus incertus PA

State: AZ

County: Cochise

Genus-species: *Peristenus stygicus* PA

County: Pima

Genus-species: *Peristenus stygicus* PA

State: CA

County: Alameda

Genus-species: *Comperia merceti* PA
Encyrtus saliens PA
Oomyzus gallerucae PA
Praon callaphis PA

County: Butte

Genus-species: *Goniozus legneri* PA
Oomyzus gallerucae PA
Scambus simulator PA
Trichogrammatoidea annulata PA

County: Colusa

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Contra Costa

Genus-species: *Encyrtus saliens* PA

County: Del Norte

Genus-species: *Urophora cardui* WE

County: Fresno

Genus-species: *Ametadoria misella* PA
Aphidius ervi PA
Bathyplectes anurus PA
Glyptapanteles harrisinae PA
Microctonus aethiopoides PA
Oomyzus gallerucae PA

County: Glenn

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Osmia cornifrons PO

County: Humboldt

Genus-species: *Urophora cardui* WE

County: Imperial

Genus-species: *Goniozus legneri* PA
Habrobracon gelechia PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: CA (continued)

County: Inyo

Genus-species: *Oomyzus gallerucae* PA

County: Kings

Genus-species: *Aphidius ervi* PA

County: Lassen

Genus-species: *Bathyplectes stenostigma* PA

County: Los Angeles

Genus-species: *Campoplex frustranae* PA
Exochomus flavipes PR
Hyperaspis senegalensis hottentota PR
Metaphycus funicularis PA
Metaphycus stramineus PA

County: Marin

Genus-species: *Rhinocyllus conicus* WE

County: Mendocino

Genus-species: *Urophora cardui* WE

County: Merced

Genus-species: *Ametadoria misella* PA
Glyptapanteles harrisinae PA
Oomyzus gallerucae PA

County: Modoc

Genus-species: *Aphidius ervi* PA
Erynniopsis antennata PA
Microlarinus lareynii WE

County: Monterey

Genus-species: *Aphidius ervi* PA
Exochomus flavipes PR
Hyperaspis senegalensis hottentota PR
Metaphycus funicularis PA
Metaphycus stramineus PA

State: CA (continued)

County: Orange

Genus-species: *Encarsia n. sp.* PA
Rhinocyllus conicus WE
Telenomus solitus PA

County: Placer

Genus-species: *Ametadoria misella* PA
Coleophora klimeschiella WE
Glyptapanteles harrisinae PA

County: Riverside

Genus-species: *Amblyseius limonicus* PR
Aphidius eadyi PA
Aphidius ervi PA
Aphidius smithi PA
Campoplex frustranae PA
Coleophora klimeschiella WE
Euseius concordis PR
Euseius fructicolus PR
Euseius hibisci PR
Euseius quetzali PR
Euseius scutalis PR
Euseius sp. nr. citrifolius PR
Euseius sp. nr. concordis PR
Euseius stipulatus PR
Euseius vivax PR
Galendromus annectens PR
Galendromus porresi PR
Goniozus legneri PA
Neoseiulus californicus PR
Oomyzus gallerucae PA
Phytoseius hawaiiensis PR
Rhinocyllus conicus WE
Typhlodromips sp. nr. tunis PR
Typhlodromips swirskii PR
Typhlodromus cornus PR
Typhlodromus rickeri PR
Typhlodromus tiliae PR

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: CA (continued)

County: Sacramento

Genus-species: *Ametadoria misella* PA
Coleophora klimeschiella WE
Exochomus flavipes PR
Glyptapanteles harrisinae PA
Hyperaspis senegalensis hottentota PR
Metaphycus funicularis PA
Metaphycus stramineus PA
Oomyzus gallerucae PA

County: San Bernardino

Genus-species: *Oomyzus gallerucae* PA
Rhinocyllus conicus WE

County: San Diego

Genus-species: *Atholus maindronii* PR
Euseius fructicolus PR
Euseius quetzali PR
Euseius scutalis PR
Euseius sp. nr. *citrifolius* PR
Euseius sp. nr. *concordis* PR
Euseius stipulatus PR
Euseius vivax PR
Exochomus flavipes PR
Galendromus annectens PR
Galendromus occidentalis PR
Galendromus porresi PR
Goetheana parvipennis PA
Goniozus legneri PA
Hyperaspis senegalensis hottentota PR
Iphiseius degenerans PR
Metaphycus funicularis PA
Metaphycus stramineus PA
Neoseiulus californicus PR
Phytoseiulus macropilis PR
Phytoseius hawaiiensis PR
Typhlodromips sp. nr. *tunis* PR
Typhlodromus rickeri PR
Typhlodromus tiliae PR

State: CA (continued)

County: San Joaquin

Genus-species: *Goniozus legneri* PA
Neochetina bruchi WE
Neochetina eichhorniae WE
Oomyzus gallerucae PA
Sameodes albigitallis WE
Trichogrammatoidea annulata PA

County: San Luis Obispo

Genus-species: *Atholus maindronii* PR
Biosteres sublaevis PA
Exochomus flavipes PR
Goniozus legneri PA
Hyperaspis senegalensis hottentota PR
Metaphycus funicularis PA
Metaphycus stramineus PA
Scambus simulator PA

County: Santa Barbara

Genus-species: *Eretmocerus* n. sp. *Haldeman* PA
Exochomus flavipes PR
Goetheana parvipennis PA
Hyperaspis senegalensis hottentota PR
Metaphycus funicularis PA
Metaphycus stramineus PA

County: Santa Clara

Genus-species: *Exochomus flavipes* PR

County: Shasta

Genus-species: *Ametadoria misella* PA
Glyptapanteles harrisinae PA

County: Siskiyou

Genus-species: *Aphidius ervi* PA
Microctonus lareynii WE

County: Solano

Genus-species: *Oomyzus gallerucae* PA
Trichogrammatoidea annulata PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: CA (continued)

County: Stanislaus

Genus-species: *Oomyzus gallerucae* PA

County: Tulare

Genus-species: *Aloencyrtus saissetiae* PA
Aphidius ervi PA
Atholus maindronii PR
Coccophagus rusti PA
Prococcophagus saissetiae PA

County: Tuolumne

Genus-species: *Ametadoria misella* PA
Glyptapanteles harrisinae PA

County: Ventura

Genus-species: *Ametadoria misella* PA
Atholus maindronii PR
Encarsia n. sp. PA
Encarsia n. sp. I Foerster PA
Eretmocerus n. sp. Haldeman PA
Exochomus flavipes PR
Glyptapanteles harrisinae PA
Hyperaspis senegalensis hottentota PR
Metaphycus funicularis PA
Metaphycus stramineus PA

County: Yolo

Genus-species: *Oomyzus gallerucae* PA

State: CO

County: Delta

Genus-species: *Brachymeria intermedia* PA
Brachymeria lasus PA
Ephedrus plagiator PA
Microlarinus spp. WE
Pimpla disparis PA
Rhinocyllus conicus WE

County: Eagle

Genus-species: *Calophasia lunula* WE

State: CO (continued)

County: Gunnison

Genus-species: *Rhinocyllus conicus* WE

County: Larimer

Genus-species: *Rhinocyllus conicus* WE

County: Las Animas

Genus-species: *Brachymeria intermedia* PA
Brachymeria lasus PA
Pimpla disparis PA

County: Mesa

Genus-species: *Brachymeria intermedia* PA
Brachymeria lasus PA
Ephedrus plagiator PA
Microctonus aethiopoides PA
Microlarinus spp. WE
Oomyzus incertus PA
Pimpla disparis PA
Rhinocyllus conicus WE
Trichosirocalus horridus WE

County: Moffat

Genus-species: *Rhinocyllus conicus* WE

County: Montrose

Genus-species: *Rhinocyllus conicus* WE
Urophora cardui WE

County: Pitkin

Genus-species: *Rhinocyllus conicus* WE

County: Rio Blanco

Genus-species: *Calophasia lunula* WE
Rhinocyllus conicus WE

State: CT

County: Middlesex

Genus-species: *Osmia cornifrons* PO

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: CT (continued)

County: New Haven

Genus-species: *Harmonia axyridis* PR

State: DC

County: Washington City

Genus-species: *Arrhenophagus albitibiae* PA

Cybocephalus nipponicus PR

Pteroptrix n. sp. PA

State: DE

County: Kent

Genus-species: *Anastatus disparis* PA

Glyptapanteles flavicoxis PA

Glyptapanteles indiensis PA

Hyposoter lymantriae PA

Pediobius foveolatus PA

County: New Castle

Genus-species: *Anagrus empoascae* PA

Anagrus flaveolus PA

Anagrus giraulti PA

Arescon enocki PA

Edovum puttleri PA

Harmonia axyridis PR

Hyposoter ebeninus PA

Lemophagus crioceritor PA

Meigenia mutabilis PA

Oplonus ebulinus PR

Pediobius foveolatus PA

Scymnus sp. PR

Stethynium empoascae PA

Tetrastichus coeruleus PA

Tetrastichus crioceridis PA

County: Sussex

Genus-species: *Pediobius foveolatus* PA

State: FL

County:

Genus-species: *Bathyplectes curculionis* PA

Microctonus colesi PA

County: Alachua

Genus-species: *Bathyplectes anurus* PA

Dibrachoides dynastes PA

Edovum puttleri PA

Oomyzus incertus PA

Paecilomyces lilacinus MI

Trichopria stomoxydis PA

County: Broward

Genus-species: *Microcharops anticarsiae* PA

County: Dade

Genus-species: *Diachasmimorpha tryoni* PA

Microcharops anticarsiae PA

Microplitis rufiventris PA

Psytalia concolor PA

Psytalia incisi PA

Zelomorpha sp. PA

County: Hendry

Genus-species: *Tytthus mundulus* PR

County: Hillsborough

Genus-species: *Larra bicolor* PA

County: Jackson

Genus-species: *Agasicles hygrophila* WE

County: Palm Beach

Genus-species: *Tytthus mundulus* PR

State: FM

County: Kosrae

Genus-species: *Encarsia smithi* PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: GA

County:

Genus-species: *Bathyplectes curculionis* PA
Microctonus colesi PA

County: Berrien

Genus-species: *Encarsia lahorensis* PA

County: Bibb

Genus-species: *Encarsia lahorensis* PA

County: Bleckley

Genus-species: *Encarsia lahorensis* PA

County: Brantley

Genus-species: *Encarsia lahorensis* PA

County: Brooks

Genus-species: *Bathyplectes anurus* PA

County: Bulloch

Genus-species: *Encarsia lahorensis* PA

County: Burke

Genus-species: *Encarsia lahorensis* PA

County: Calhoun

Genus-species: *Encarsia lahorensis* PA

County: Candler

Genus-species: *Encarsia lahorensis* PA

County: Chatham

Genus-species: *Encarsia lahorensis* PA

County: Clay

Genus-species: *Encarsia lahorensis* PA

County: Coffee

Genus-species: *Encarsia lahorensis* PA

State: GA (continued)

County: Colquitt

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Encarsia lahorensis PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Columbia

Genus-species: *Encarsia lahorensis* PA

County: Crisp

Genus-species: *Encarsia lahorensis* PA

County: Decatur

Genus-species: *Encarsia lahorensis* PA

County: Dodge

Genus-species: *Encarsia lahorensis* PA

County: Dooly

Genus-species: *Encarsia lahorensis* PA

County: Dougherty

Genus-species: *Encarsia lahorensis* PA

County: Early

Genus-species: *Encarsia lahorensis* PA

County: Emanuel

Genus-species: *Encarsia lahorensis* PA

County: Evans

Genus-species: *Encarsia lahorensis* PA

County: Glascock

Genus-species: *Encarsia lahorensis* PA

County: Gordon

Genus-species: *Bathyplectes anurus* PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: GA (continued)

County: Grady

Genus-species: Bathyplectes anurus PA
Encarsia lahorensis PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Greene

Genus-species: Encarsia lahorensis PA

County: Heard

Genus-species: Encarsia lahorensis PA

County: Henry

Genus-species: Bathyplectes anurus PA

County: Houston

Genus-species: Encarsia lahorensis PA

County: Irwin

Genus-species: Encarsia lahorensis PA

County: Jeff Davis

Genus-species: Encarsia lahorensis PA

County: Jenkins

Genus-species: Encarsia lahorensis PA

County: Jones

Genus-species: Encarsia lahorensis PA

County: Lanier

Genus-species: Agasicles hygrophila WE

County: Macon

Genus-species: Bathyplectes anurus PA
Dibrachoides dynastes PA
Encarsia lahorensis PA
Microctonus aethiopoides PA
Microctonus colesi PA

State: GA (continued)

County: Miller

Genus-species: Encarsia lahorensis PA

County: Mitchell

Genus-species: Encarsia lahorensis PA

County: Montgomery

Genus-species: Encarsia lahorensis PA

County: Morgan

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

County: Muscogee

Genus-species: Encarsia lahorensis PA

County: Pierce-Brantley

Genus-species: Agasicles hygrophila WE

County: Pike

Genus-species: Encarsia lahorensis PA

County: Pulaski

Genus-species: Encarsia lahorensis PA

County: Screven

Genus-species: Bathyplectes anurus PA
Dibrachoides dynastes PA
Encarsia lahorensis PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

County: Seminole

Genus-species: Agasicles hygrophila WE

County: Sumter

Genus-species: Bathyplectes anurus PA
Encarsia lahorensis PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: GA (continued)

County: Tattnall

Genus-species: *Encarsia lahorensis* PA

County: Telfair

Genus-species: *Encarsia lahorensis* PA

County: Terrell

Genus-species: *Encarsia lahorensis* PA

County: Thomas

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Tift

Genus-species: *Agasicles hygrophila* WE
Encarsia lahorensis PA

County: Toombs

Genus-species: *Encarsia lahorensis* PA

County: Treutlen

Genus-species: *Encarsia lahorensis* PA

County: Troup

Genus-species: *Encarsia lahorensis* PA

County: Turner

Genus-species: *Encarsia lahorensis* PA

County: Walker

Genus-species: *Bathyplectes anurus* PA

County: Ware-Pierce

Genus-species: *Agasicles hygrophila* WE

State: GA (continued)

County: Warren

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

County: Washington

Genus-species: *Encarsia lahorensis* PA

County: Worth

Genus-species: *Encarsia lahorensis* PA

State: GU

County:

Genus-species: *Diglyphus begini* PA

State: HI

County: Hawaii

Genus-species: *Amblyseius longispinosus* PR
Delphastus pusillus PR
Encarsia sp. PA
Scolothrips sexmaculatus PR
Trichopoda pilipes PA
Trissolcus basalis PA

County: Honolulu

Genus-species: *Amblyseius longispinosus* PR
Cerchysiella utilis PA
Cotesia plutellae PA
Diachasmimorpha longicaudatas PA
Diadromus collaris PA
Galendromus occidentalis PR
Ganaspidium utilis PA
Neoseiulus californicus PR
Nephaspis oculata PR
Psytalia incisi PA
Scolothrips sexmaculatus PR
Steinernema carpocapsae PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: HI (continued)

County: Kauai

Genus-species: Amblyseius longispinosus PR
Encarsia ?haitiensis PA
Nephaspis oculata PR
Scolothrips sexmaculatus PR

County: Maui

Genus-species: Amblyseius longispinosus PR
Campoplex n. sp. PA
Cerchysiella utilis PA
Chrysocharis caribea PA
Chrysocharis oscinidis PA
Chrysonotomyia punctiventris PA
Cotesia plutellae PA
Delphastus pusillus PR
Encarsia ?haitiensis PA
Encarsia sp. PA
Eretmocerus sp. PA
Gnaspidium utilis PA
Halticoptera circulus PA
Neoseiulus californicus PR
Nephaspis bicolor PR
Nephaspis oculata PR
Opius dissitus PA
Trissolcus basalis PA

County: Maui (Lanai I)

Genus-species: Cerchysiella utilis PA

County: Maui (Molokai I)

Genus-species: Delphastus pusillus PR
Encarsia ?haitiensis PA
Nephaspis bicolor PR
Nephaspis oculata PR

State: IA

County:

Genus-species: Bathyplectes curculionis PA
Microctonus colesi PA

State: IA (continued)

County: Adair

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA

County: Adams

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA

County: Allamakee

Genus-species: Bathyplectes anurus PA

County: Buchanan

Genus-species: Bathyplectes anurus PA

County: Butler

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA

County: Carroll

Genus-species: Bathyplectes anurus PA

County: Cass

Genus-species: Microctonus aethiopoides PA

County: Cerro Gordo

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA

County: Chickasaw

Genus-species: Bathyplectes anurus PA

County: Clarke

Genus-species: Bathyplectes anurus PA

County: Clayton

Genus-species: Dibrachoides dynastes PA
Oomyzus incertus PA

County: Crawford

Genus-species: Bathyplectes anurus PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: IA (continued)

County: Dallas

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Davis

Genus-species: *Dibrachoides dynastes* PA

County: Delaware

Genus-species: *Bathyplectes anurus* PA

County: Des Moines

Genus-species: *Bathyplectes anurus* PA

County: Fayette

Genus-species: *Bathyplectes anurus* PA

County: Hardin

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Harrison

Genus-species: *Bathyplectes anurus* PA

County: Iowa

Genus-species: *Bathyplectes anurus* PA

County: Jackson

Genus-species: *Bathyplectes anurus* PA

County: Jasper

Genus-species: *Bathyplectes anurus* PA

County: Jefferson

Genus-species: *Bathyplectes anurus* PA

County: Linn

Genus-species: *Bathyplectes anurus* PA

County: Marshall

Genus-species: *Bathyplectes anurus* PA

State: IA (continued)

County: Monroe

Genus-species: *Bathyplectes anurus* PA

County: Montgomery

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Muscatine

Genus-species: *Bathyplectes anurus* PA

County: Page

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Pottawattamie

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Ringgold

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Scott

Genus-species: *Bathyplectes anurus* PA

County: Story

Genus-species: *Osmia cornifrons* PO

County: Taylor

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Warren

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Washington

Genus-species: *Bathyplectes anurus* PA

County: Wayne

Genus-species: *Bathyplectes anurus* PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: IA (continued)

County: Webster

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

State: ID

County:

Genus-species: *Urophora affinis* WE
Urophora quadrifasciata WE

County: Bonner

Genus-species: *Osmia cornifrons* PO

County: Custer

Genus-species: *Rhinocyllus conicus* WE

County: Kootenai

Genus-species: *Calophasia lunula* WE

County: Nez Perce

Genus-species: *Urophora cardui* WE

State: IL

County:

Genus-species: *Bathyplectes curculionis* PA
Microctonus colesi PA

County: Adams

Genus-species: *Bathyplectes anurus* PA

County: Bond

Genus-species: *Bathyplectes anurus* PA

County: Boone

Genus-species: *Bathyplectes anurus* PA

County: Bureau

Genus-species: *Bathyplectes anurus* PA

State: IL (continued)

County: Clark

Genus-species: *Bathyplectes anurus* PA

County: Coles

Genus-species: *Bathyplectes anurus* PA

County: Du Page

Genus-species: *Osmia cornifrons* PO

County: Effingham

Genus-species: *Bathyplectes anurus* PA

County: Fayette

Genus-species: *Bathyplectes anurus* PA

County: Hamilton

Genus-species: *Bathyplectes anurus* PA

County: Henderson

Genus-species: *Bathyplectes anurus* PA

County: Iroquois

Genus-species: *Bathyplectes anurus* PA

County: Jackson

Genus-species: *Bathyplectes anurus* PA

County: Kane

Genus-species: *Bathyplectes anurus* PA

County: Kendall

Genus-species: *Bathyplectes anurus* PA

County: Livingston

Genus-species: *Bathyplectes anurus* PA

County: Madison

Genus-species: *Bathyplectes anurus* PA

County: McHenry

Genus-species: *Bathyplectes anurus* PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: IL (continued)

County: McLean
Genus-species: *Bathyplectes anurus* PA

County: Mercer
Genus-species: *Bathyplectes anurus* PA

County: Montgomery
Genus-species: *Bathyplectes anurus* PA

County: Moultrie
Genus-species: *Bathyplectes anurus* PA

County: Ogle
Genus-species: *Bathyplectes anurus* PA

County: Peoria
Genus-species: *Bathyplectes anurus* PA

County: Rock Island
Genus-species: *Bathyplectes anurus* PA

County: Schuyler
Genus-species: *Bathyplectes anurus* PA

County: Shelby
Genus-species: *Bathyplectes anurus* PA

County: Stark
Genus-species: *Osmia cornifrons* PO

County: Stephenson
Genus-species: *Bathyplectes anurus* PA

County: Union
Genus-species: *Bathyplectes anurus* PA

County: Vermilion
Genus-species: *Bathyplectes anurus* PA

County: Warren
Genus-species: *Bathyplectes anurus* PA

State: IL (continued)

County: Washington
Genus-species: *Bathyplectes anurus* PA

County: Wayne
Genus-species: *Bathyplectes anurus* PA

County: Will
Genus-species: *Bathyplectes anurus* PA

County: Winnebago
Genus-species: *Bathyplectes anurus* PA

County: Woodford
Genus-species: *Bathyplectes anurus* PA

State: IN

County: Porter
Genus-species: *Osmia cornifrons* PO

State: KS

County:
Genus-species: *Bathyplectes curculionis* PA
Microctonus colesi PA

County: Atchison
Genus-species: *Bathyplectes anurus* PA

County: Barton
Genus-species: *Bathyplectes anurus* PA

County: Bourbon
Genus-species: *Bathyplectes anurus* PA

County: Brown
Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Cherokee
Genus-species: *Bathyplectes anurus* PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: KS (continued)

County: Cloud

Genus-species: *Rhinocyllus conicus* WE

County: Comanche

Genus-species: *Bathyplectes anurus* PA

County: Cowley

Genus-species: *Bathyplectes anurus* PA

County: Crawford

Genus-species: *Bathyplectes anurus* PA
Osmia cornifrons PO

County: Dickinson

Genus-species: *Bathyplectes anurus* PA

County: Doniphan

Genus-species: *Bathyplectes anurus* PA

County: Douglas

Genus-species: *Bathyplectes anurus* PA

County: Franklin

Genus-species: *Bathyplectes anurus* PA

County: Graham

Genus-species: *Bathyplectes anurus* PA

County: Greenwood

Genus-species: *Bathyplectes anurus* PA

County: Jackson

Genus-species: *Bathyplectes anurus* PA

County: Jefferson

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Oomyzus incertus PA

State: KS (continued)

County: Johnson

Genus-species: *Bathyplectes anurus* PA

County: Lincoln

Genus-species: *Bathyplectes anurus* PA

County: Linn

Genus-species: *Bathyplectes anurus* PA

County: Marion

Genus-species: *Bathyplectes anurus* PA

County: Marshall

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Miami

Genus-species: *Bathyplectes anurus* PA

County: Mitchell

Genus-species: *Rhinocyllus conicus* WE

County: Montgomery

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Oomyzus incertus PA

County: Ness

Genus-species: *Bathyplectes anurus* PA

County: Osage

Genus-species: *Bathyplectes anurus* PA

County: Osborne

Genus-species: *Bathyplectes anurus* PA
Rhinocyllus conicus WE

County: Pottawatomie

Genus-species: *Bathyplectes anurus* PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: KS (continued)

County: Pratt

Genus-species: *Bathyplectes anurus* PA

County: Russell

Genus-species: *Bathyplectes anurus* PA

County: Scott

Genus-species: *Bathyplectes anurus* PA

County: Sedgwick

Genus-species: *Bathyplectes anurus* PA

County: Sheridan

Genus-species: *Bathyplectes anurus* PA

State: KY

County:

Genus-species: *Bathyplectes curculionis* PA
Microctonus colesi PA

County: Clark

Genus-species: *Microctonus aethiopoides* PA

County: Fayette

Genus-species: *Microctonus aethiopoides* PA

County: Hardin

Genus-species: *Microctonus aethiopoides* PA

County: Laurel

Genus-species: *Bathyplectes anurus* PA

County: Lincoln

Genus-species: *Microctonus aethiopoides* PA

County: Logan

Genus-species: *Bathyplectes anurus* PA

County: Monroe

Genus-species: *Bathyplectes anurus* PA

State: KY (continued)

County: Pulaski

Genus-species: *Bathyplectes anurus* PA

County: Shelby

Genus-species: *Microctonus aethiopoides* PA

County: Warren

Genus-species: *Bathyplectes anurus* PA

State: LA

County:

Genus-species: *Bathyplectes curculionis* PA
Microctonus colesi PA

County: Acadia

Genus-species: *Encarsia lahorensis* PA

County: Allen

Genus-species: *Encarsia lahorensis* PA

County: Ascension

Genus-species: *Encarsia lahorensis* PA

County: Bossier

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Encarsia lahorensis PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

County: Caddo

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA

County: Caldwell

Genus-species: *Encarsia lahorensis* PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: LA (continued)

County: Claiborne

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA

County: East Baton Rouge

Genus-species: *Cotesia ruficrus* PA
Encarsia lahorensis PA
Telenomus chloropus PA

County: East Carroll

Genus-species: *Encarsia lahorensis* PA

County: East Feliciana

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Encarsia lahorensis PA

County: Grant

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Iberville

Genus-species: *Encarsia lahorensis* PA
Telenomus chloropus PA

County: Jackson

Genus-species: *Encarsia lahorensis* PA

County: Jefferson

Genus-species: *Encarsia lahorensis* PA

County: Lafourche

Genus-species: *Encarsia lahorensis* PA

County: Livingston

Genus-species: *Encarsia lahorensis* PA

State: LA (continued)

County: Madison

Genus-species: *Encarsia lahorensis* PA

County: Morehouse

Genus-species: *Encarsia lahorensis* PA

County: Natchitoches

Genus-species: *Bathyplectes anurus* PA
Encarsia lahorensis PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Orleans

Genus-species: *Encarsia lahorensis* PA

County: Ouachita

Genus-species: *Encarsia lahorensis* PA

County: Plaquemines

Genus-species: *Encarsia lahorensis* PA

County: Pointe Coupee

Genus-species: *Encarsia lahorensis* PA

County: Red River

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Encarsia lahorensis PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Sabine

Genus-species: *Encarsia lahorensis* PA

County: St Charles

Genus-species: *Encarsia lahorensis* PA

County: St Helena

Genus-species: *Bathyplectes anurus* PA
Oomyzus incertus PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: LA (continued)

County: St John /Baptist

Genus-species: *Encarsia lahorensis* PA

County: St Landry

Genus-species: *Telenomus chloropus* PA

County: St Tammany

Genus-species: *Encarsia lahorensis* PA

County: Tangipahoa

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Microctonus colesi PA
Telenomus chloropus PA

County: Terrebonne

Genus-species: *Encarsia lahorensis* PA

County: Union

Genus-species: *Encarsia lahorensis* PA

County: Vernon

Genus-species: *Encarsia lahorensis* PA

County: West Baton Rouge

Genus-species: *Encarsia lahorensis* PA

County: West Feliciana

Genus-species: *Encarsia lahorensis* PA

County: Winn

Genus-species: *Encarsia lahorensis* PA

State: MA

County: Barnstable

Genus-species: *Aleiodes lymantriae* PA

County: Plymouth

Genus-species: *Osmia cornifrons* PO

State: MD

County: Caroline

Genus-species: *Pediobius foveolatus* PA

County: Carroll

Genus-species: *Coccipolipus epilachnae* PA
Edovum puttleri PA
Pediobius foveolatus PA

County: Dorchester

Genus-species: *Pediobius foveolatus* PA

County: Frederick

Genus-species: *Amblyseius* sp. PR
Glyptapanteles flavicoxis PA
Phytoseiulus persimilis PR
Trichosirocalus horridus WE

County: Howard

Genus-species: *Istocheta aldrichi* PA
Osmia cornifrons PO

County: Kent

Genus-species: *Pediobius foveolatus* PA

County: Montgomery

Genus-species: *Istocheta aldrichi* PA
Pediobius foveolatus PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: MD (continued)

County: Prince Georges

Genus-species: Coccipolipus epilachnae PA
Edovum puttleri PA
Encarsia citrina PA
Encarsia fasciata PA
Glyptapanteles flavicoxis PA
Hyles euphorbiae WE
Istocheta aldrichi PA
Osmia cornifrons PO
Pteroptrix n. sp. PA
Urophora affinis WE
Urophora cardui WE
Urophora quadrifasciata WE
Urophora stylata WE

County: Queen Anne

Genus-species: Lemophagus crioceritor PA
Meigenia mutabilis PA
Pediobius foveolatus PA
Tetrastichus coeruleus PA
Tetrastichus crioceridis PA

County: Somerset

Genus-species: Pediobius foveolatus PA

County: Talbot

Genus-species: Pediobius foveolatus PA

County: Washington

Genus-species: Trichosirocalus horridus WE

County: Wicomico

Genus-species: Pediobius foveolatus PA

County: Worcester

Genus-species: Pediobius foveolatus PA

State: ME

County: Franklin

Genus-species: Pediobius foveolatus PA

State: ME (continued)

County: Kennebec

Genus-species: Edovum puttleri PA
Pediobius foveolatus PA

County: Washington

Genus-species: Ancistrocerus catskill PR
Ancistrocerus tuberculocephalus PR
Euodynerus hidalgo PR
Euodynerus leucomelas PR

State: MI

County:

Genus-species: Bathyplectes curculionis PA
Microctonus colesi PA

County: Alcona

Genus-species: Bathyplectes anurus PA

County: Allegan

Genus-species: Bathyplectes anurus PA

County: Antrim

Genus-species: Bathyplectes anurus PA

County: Bay

Genus-species: Bathyplectes anurus PA

County: Berrien

Genus-species: Amblyseius sp. PR
Encarsia formosa PA
Phytoseiulus persimilis PR

County: Calhoun

Genus-species: Bathyplectes anurus PA

County: Cass

Genus-species: Bathyplectes stenostigma PA

County: Chippewa

Genus-species: Bathyplectes anurus PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: MI (continued)

County: Crawford
Genus-species: *Bathyplectes anurus* PA

County: Delta
Genus-species: *Bathyplectes anurus* PA

County: Dickinson
Genus-species: *Bathyplectes anurus* PA

County: Emmet
Genus-species: *Bathyplectes anurus* PA

County: Genesee
Genus-species: *Bathyplectes anurus* PA

County: Gladwin
Genus-species: *Bathyplectes anurus* PA

County: Gogebic
Genus-species: *Bathyplectes anurus* PA

County: Grand Traverse
Genus-species: *Bathyplectes anurus* PA

County: Gratiot
Genus-species: *Aleiodes lymantriae* PA
Bathyplectes anurus PA

County: Hillsdale
Genus-species: *Bathyplectes anurus* PA

County: Houghton
Genus-species: *Bathyplectes anurus* PA

County: Huron
Genus-species: *Bathyplectes anurus* PA

County: Ingham
Genus-species: *Bathyplectes anurus* PA

State: MI (continued)

County: Isabella
Genus-species: *Bathyplectes anurus* PA

County: Kent
Genus-species: *Bathyplectes anurus* PA

County: Leelanau
Genus-species: *Bathyplectes anurus* PA

County: Lewanee
Genus-species: *Osmia cornifrons* PO

County: Manistee
Genus-species: *Bathyplectes anurus* PA

County: Mason
Genus-species: *Bathyplectes anurus* PA

County: Missaukee
Genus-species: *Bathyplectes anurus* PA

County: Monroe
Genus-species: *Bathyplectes anurus* PA
Edovum puttleri PA

County: Montmorency
Genus-species: *Bathyplectes anurus* PA

County: Newaygo
Genus-species: *Bathyplectes anurus* PA

County: Oakland
Genus-species: *Bathyplectes anurus* PA
Osmia cornifrons PO

County: Ogemaw
Genus-species: *Bathyplectes anurus* PA

County: Osceola
Genus-species: *Bathyplectes anurus* PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: MI (continued)

County: Presque Isle
Genus-species: Bathyplectes anurus PA

County: Sanilac
Genus-species: Osmia cornifrons PO

County: St Clair
Genus-species: Bathyplectes anurus PA

County: St Joseph
Genus-species: Bathyplectes anurus PA

County: Washtenaw
Genus-species: Bathyplectes anurus PA

State: MN

County:
Genus-species: Bathyplectes curculionis PA
Microctonus colesi PA

County: Dakota
Genus-species: Bathyplectes anurus PA

County: Wabasha
Genus-species: Bathyplectes anurus PA

County: Washington
Genus-species: Bathyplectes anurus PA

County: Wright
Genus-species: Bathyplectes anurus PA

State: MO

County:
Genus-species: Bathyplectes curculionis PA
Microctonus colesi

County: Adair
Genus-species: Bathyplectes anurus PA

State: MO (continued)

County: Bates
Genus-species: Rhinocyllus conicus WE

County: Benton
Genus-species: Rhinocyllus conicus WE

County: Boone
Genus-species: Cotesia rubecula PA
Edovum puttleri PA
Hyposoter ebeninus PA

County: Buchanan
Genus-species: Bathyplectes anurus PA

County: Caldwell
Genus-species: Rhinocyllus conicus WE

County: Camden
Genus-species: Bathyplectes anurus PA

County: Cass
Genus-species: Rhinocyllus conicus WE

County: Cedar
Genus-species: Rhinocyllus conicus WE

County: Christian
Genus-species: Bathyplectes anurus PA
Cotesia plutellae PA
Cotesia rubecula PA
Rhinocyllus conicus WE

County: Clinton
Genus-species: Bathyplectes anurus PA

County: Cole
Genus-species: Bathyplectes anurus PA

County: Cooper
Genus-species: Bathyplectes anurus PA
Pholetesor pedias PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: MO (continued)

County: Dade

Genus-species: *Bathyplectes anurus* PA
Rhinocyllus conicus WE

County: Dallas

Genus-species: *Bathyplectes anurus* PA
Rhinocyllus conicus WE

County: DeKalb

Genus-species: *Rhinocyllus conicus* WE

County: Franklin

Genus-species: *Bathyplectes anurus* PA

County: Gasconade

Genus-species: *Bathyplectes anurus* PA

County: Gentry

Genus-species: *Bathyplectes anurus* PA

County: Greene

Genus-species: *Dibrachoides dynastes* PA

County: Grundy

Genus-species: *Rhinocyllus conicus* WE

County: Henry

Genus-species: *Bathyplectes anurus* PA
Rhinocyllus conicus WE

County: Howard

Genus-species: *Cotesia rubecula* PA
Hyposoter ebeninus PA
Rhinocyllus conicus WE

County: Iron

Genus-species: *Bathyplectes anurus* PA
Rhinocyllus conicus WE

County: Jackson

Genus-species: *Rhinocyllus conicus* WE

State: MO (continued)

County: Jasper

Genus-species: *Bathyplectes anurus* PA

County: Jefferson

Genus-species: *Bathyplectes anurus* PA

County: Johnson

Genus-species: *Rhinocyllus conicus* WE

County: Knox

Genus-species: *Bathyplectes anurus* PA

County: Lawrence

Genus-species: *Bathyplectes anurus* PA
Cotesia plutellae PA
Cotesia rubecula PA
Hyposoter ebeninus PA

County: Lincoln

Genus-species: *Bathyplectes anurus* PA

County: Linn

Genus-species: *Bathyplectes anurus* PA

County: Macon

Genus-species: *Bathyplectes anurus* PA

County: Madison

Genus-species: *Bathyplectes anurus* PA
Rhinocyllus conicus WE

County: Marion

Genus-species: *Bathyplectes anurus* PA

County: Montgomery

Genus-species: *Bathyplectes anurus* PA

County: Newton

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: MO (continued)

County: Osage

Genus-species: *Bathyplectes anurus* PA

County: Pettis

Genus-species: *Bathyplectes anurus* PA

County: Pike

Genus-species: *Bathyplectes anurus* PA

County: Platte

Genus-species: *Bathyplectes anurus* PA
Rhinocyllus conicus WE

County: Polk

Genus-species: *Bathyplectes anurus* PA
Rhinocyllus conicus WE

County: Ray

Genus-species: *Rhinocyllus conicus* WE

County: Saline

Genus-species: *Pholetesor pedias* PA

County: Schuyler

Genus-species: *Bathyplectes stenostigma* PA
Dibrachoides dynastes PA

County: Scott

Genus-species: *Bathyplectes anurus* PA

County: St Charles

Genus-species: *Bathyplectes anurus* PA

County: St Francois

Genus-species: *Rhinocyllus conicus* WE

County: St Louis

Genus-species: *Cotesia plutellae* PA
Cotesia rubecula PA

State: MO (continued)

County: Ste Genevieve

Genus-species: *Bathyplectes anurus* PA

County: Ste Genevieve?

Genus-species: *Rhinocyllus conicus* WE

County: Vernon

Genus-species: *Bathyplectes anurus* PA

County: Washington

Genus-species: *Bathyplectes anurus* PA

County: Worth

Genus-species: *Bathyplectes anurus* PA
Rhinocyllus conicus WE

County: Wright

Genus-species: *Rhinocyllus conicus* WE

State: MS

County:

Genus-species: *Bathyplectes curculionis* PA
Microctonus colesi PA

County: Adams

Genus-species: *Encarsia lahorensis* PA

County: Alcorn

Genus-species: *Bathyplectes anurus* PA

County: Amite

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Attala

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Encarsia lahorensis PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: MS (continued)

County: Benton
Genus-species: Bathyplectes anurus PA

County: Choctaw
Genus-species: Encarsia lahorensis PA

County: Clairborne
Genus-species: Encarsia lahorensis PA

County: Copiah
Genus-species: Encarsia lahorensis PA

County: Covington
Genus-species: Encarsia lahorensis PA

County: Forrest
Genus-species: Encarsia lahorensis PA

County: Franklin
Genus-species: Encarsia lahorensis PA

County: George
Genus-species: Encarsia lahorensis PA

County: Hancock
Genus-species: Encarsia lahorensis PA

County: Harrison
Genus-species: Encarsia lahorensis PA

County: Jackson
Genus-species: Encarsia lahorensis PA

County: Jasper
Genus-species: Bathyplectes anurus PA
Encarsia lahorensis PA

County: Jefferson Davis
Genus-species: Encarsia lahorensis PA

State: MS (continued)

County: Jones
Genus-species: Encarsia lahorensis PA

County: Lawrence
Genus-species: Bathyplectes anurus PA
Dibrachoides dynastes PA
Encarsia lahorensis PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

County: Leake
Genus-species: Encarsia lahorensis PA

County: Lee
Genus-species: Bathyplectes anurus PA

County: Leflore
Genus-species: Agasicles hygrophila WE

County: Lincoln
Genus-species: Encarsia lahorensis PA

County: Marion
Genus-species: Encarsia lahorensis PA

County: Marshall
Genus-species: Bathyplectes anurus PA

County: Monroe
Genus-species: Bathyplectes anurus PA
Dibrachoides dynastes PA

County: Neshoba
Genus-species: Bathyplectes anurus PA
Encarsia lahorensis PA

County: Noxubee
Genus-species: Bathyplectes anurus PA
Oomyzus incertus PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: MS (continued)

County: Pearl River

Genus-species: *Encarsia lahorensis* PA

County: Perry

Genus-species: *Encarsia lahorensis* PA

County: Pike

Genus-species: *Encarsia lahorensis* PA

County: Pontotoc

Genus-species: *Bathyplectes anurus* PA

County: Prentiss

Genus-species: *Bathyplectes anurus* PA

County: Scott

Genus-species: *Bathyplectes anurus* PA
Encarsia lahorensis PA
Stethynium empoasca PA

County: Simpson

Genus-species: *Encarsia lahorensis* PA

County: Smith

Genus-species: *Encarsia lahorensis* PA

County: Stone

Genus-species: *Bathyplectes anurus* PA
Encarsia lahorensis PA

County: Tunica

Genus-species: *Bathyplectes anurus* PA

County: Walthall

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Encarsia lahorensis PA

County: Warren

Genus-species: *Agasicles hygrophila* WE
Encarsia lahorensis PA

State: MS (continued)

County: Washington

Genus-species: *Harmonia axyridis* PR

County: Webster

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA

County: Wilkinson

Genus-species: *Encarsia lahorensis* PA

County: Winston

Genus-species: *Bathyplectes anurus* PA
Encarsia lahorensis PA

County: Yalobusha

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA

County: Yazoo

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

State: MT

County:

Genus-species: *Urophora affinis* WE

County: ?

Genus-species: *Urophora quadrifasciata* WE

County: Carbon

Genus-species: *Microctonus aethiopoides* PA
Oomyzus incertus PA

County: Cascade

Genus-species: *Rhinocyllus conicus* WE

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: MT (continued)

County: Gallatin

Genus-species: *Hadroplontus litura* WE
 Hyles euphorbiae WE
 Trichosirocalus horridus WE

County: Jefferson

Genus-species: *Calophasia lunula* WE

County: Lewis and Clark

Genus-species: *Calophasia lunula* WE

County: Mineral

Genus-species: *Sphenoptera jugoslavica* WE

County: Missoula

Genus-species: *Metzneria paucipunctella* WE

County: Ravalli

Genus-species: *Hyles euphorbiae* WE
 Metzneria paucipunctella WE

County: Silver Bow

Genus-species: *Rhinocyllus conicus* WE

County: Stillwater

Genus-species: *Hyles euphorbiae* WE
 Oberea erythrocephala WE

County: Teton

Genus-species: *Hyles euphorbiae* WE

County: Yellowstone

Genus-species: *Rhinocyllus conicus* WE

State: NC

County:

Genus-species: *Bathyplectes curculionis* PA
 Microctonus colesi PA

State: NC (continued)

County: Alleghany

Genus-species: *Bathyplectes anurus* PA

County: Anson

Genus-species: *Encarsia lahorensis* PA

County: Ashe

Genus-species: *Bathyplectes anurus* PA

County: Beaufort

Genus-species: *Encarsia lahorensis* PA

County: Bertie

Genus-species: *Encarsia lahorensis* PA

County: Bladen

Genus-species: *Encarsia lahorensis* PA

County: Brunswick

Genus-species: *Encarsia lahorensis* PA

County: Buncombe

Genus-species: *Bathyplectes anurus* PA

County: Carteret

Genus-species: *Encarsia lahorensis* PA

County: Chowan

Genus-species: *Encarsia lahorensis* PA

County: Cleveland

Genus-species: *Bathyplectes anurus* PA

County: Columbus

Genus-species: *Encarsia lahorensis* PA

County: Craven

Genus-species: *Agasicles hygrophila* WE
 Encarsia lahorensis PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: NC (continued)

County: Cumberland
Genus-species: Encarsia lahorensis PA

County: Dare
Genus-species: Encarsia lahorensis PA

County: Davidson
Genus-species: Bathyplectes anurus PA

County: Duplin
Genus-species: Encarsia lahorensis PA

County: Edgecombe
Genus-species: Encarsia lahorensis PA

County: Granville
Genus-species: Tetrastichus julis PA

County: Greene
Genus-species: Encarsia lahorensis PA

County: Guilford
Genus-species: Encarsia lahorensis PA

County: Harnett
Genus-species: Encarsia lahorensis PA

County: Haywood
Genus-species: Bathyplectes anurus PA

County: Hertford
Genus-species: Encarsia lahorensis PA

County: Johnston
Genus-species: Encarsia lahorensis PA

County: Jones
Genus-species: Encarsia lahorensis PA

County: Lenoir
Genus-species: Encarsia lahorensis PA

State: NC (continued)

County: Lincoln
Genus-species: Bathyplectes anurus PA

County: Martin
Genus-species: Encarsia lahorensis PA

County: Mecklenburg
Genus-species: Encarsia lahorensis PA

County: New Hanover
Genus-species: Encarsia lahorensis PA

County: Onslow
Genus-species: Encarsia lahorensis PA

County: Orange
Genus-species: Bathyplectes anurus PA

County: Pasquotank
Genus-species: Encarsia lahorensis PA

County: Pender
Genus-species: Agasicles hygrophila WE
Encarsia lahorensis PA

County: Perquimans
Genus-species: Encarsia lahorensis PA

County: Pitt
Genus-species: Encarsia lahorensis PA

County: Richmond
Genus-species: Encarsia lahorensis PA

County: Robeson
Genus-species: Bathyplectes anurus PA
Encarsia lahorensis PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: NC

County: Sampson

Genus-species: Agasicles hygrophila WE
Encarsia lahorensis PA
Trichogramma pretiosum PA

County: Scotland

Genus-species: Encarsia lahorensis PA

County: Union

Genus-species: Encarsia lahorensis PA

County: Wake

Genus-species: Encarsia lahorensis PA
Istocheta aldrichi PA

County: Washington

Genus-species: Agasicles hygrophila WE

County: Wayne

Genus-species: Encarsia lahorensis PA

County: Wilson

Genus-species: Encarsia lahorensis PA

State: ND

County:

Genus-species: Bathyplectes curculionis PA
Microctonus colesi PA

County: Burleigh

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA

County: Cavalier

Genus-species: Rhinocyllus conicus WE

County: McKenzie

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA

State: NE

County:

Genus-species: Bathyplectes curculionis PA
Microctonus colesi PA

County: Adams

Genus-species: Rhinocyllus conicus WE

County: Blaine

Genus-species: Bathyplectes anurus PA

County: Boone

Genus-species: Rhinocyllus conicus WE

County: Brown

Genus-species: Bathyplectes anurus PA

County: Buffalo

Genus-species: Bathyplectes anurus PA

County: Burt

Genus-species: Bathyplectes anurus PA

County: Cherry

Genus-species: Bathyplectes anurus PA

County: Clay

Genus-species: Rhinocyllus conicus WE

County: Custer

Genus-species: Bathyplectes anurus PA

County: Dawson

Genus-species: Bathyplectes anurus PA
Rhinocyllus conicus WE

County: Deuel

Genus-species: Bathyplectes anurus PA

County: Dundy

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: NE (continued)

County: Fillmore

Genus-species: *Rhinocyllus conicus* WE

County: Franklin

Genus-species: *Bathyplectes anurus* PA

County: Furnas

Genus-species: *Bathyplectes anurus* PA*Microctonus aethiopoides* PA*Rhinocyllus conicus* WE

County: Gage

Genus-species: *Bathyplectes anurus* PA*Microctonus aethiopoides* PA

County: Hall

Genus-species: *Bathyplectes anurus* PA

County: Hamilton

Genus-species: *Bathyplectes anurus* PA

County: Harlan

Genus-species: *Bathyplectes anurus* PA

County: Hitchcock

Genus-species: *Bathyplectes anurus* PA

County: Howard

Genus-species: *Bathyplectes anurus* PA*Rhinocyllus conicus* WE

County: Keith

Genus-species: *Bathyplectes anurus* PA

County: Kimball

Genus-species: *Bathyplectes anurus* PA

County: Lancaster

Genus-species: *Muscidifurax zaraptor* PA

State: NE (continued)

County: Lincoln

Genus-species: *Bathyplectes anurus* PA

County: Madison

Genus-species: *Rhinocyllus conicus* WE

County: Merrick

Genus-species: *Rhinocyllus conicus* WE

County: Morrill

Genus-species: *Bathyplectes anurus* PA

County: Nance

Genus-species: *Bathyplectes anurus* PA

County: Nemaha

Genus-species: *Rhinocyllus conicus* WE

County: Nuckolls

Genus-species: *Bathyplectes anurus* PA*Rhinocyllus conicus* WE

County: Otoe

Genus-species: *Bathyplectes anurus* PA*Microctonus aethiopoides* PA*Rhinocyllus conicus* WE

County: Pawnee

Genus-species: *Rhinocyllus conicus* WE

County: Perkins

Genus-species: *Bathyplectes anurus* PA

County: Pierce

Genus-species: *Bathyplectes anurus* PA

County: Platte

Genus-species: *Bathyplectes anurus* PA

County: Red Willow

Genus-species: *Rhinocyllus conicus* WE

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: NE (continued)

County: Saunders

Genus-species: *Bathyplectes anurus* PA

County: Scotts Bluff

Genus-species: *Bathyplectes anurus* PA

County: Seward

Genus-species: *Bathyplectes anurus* PA

County: Sheridan

Genus-species: *Bathyplectes anurus* PA

County: Thayer

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Rhinocyllus conicus WE

State: NJ

County: Burlington

Genus-species: *Oplonus ebulinus* PR
Pediobius foveolatus PA

County: Cape May

Genus-species: *Pediobius foveolatus* PA

County: Cumberland

Genus-species: *Pediobius foveolatus* PA

County: Gloucester

Genus-species: *Pediobius foveolatus* PA

County: Hunterdon

Genus-species: *Hyposoter lymantriae* PA

County: Mercer

Genus-species: *Oplonus ebulinus* PR
Pediobius foveolatus PA

State: NJ (continued)

County: Middlesex

Genus-species: *Edovum puttleri* PA
Glyptapanteles flavicoxis PA
Pediobius foveolatus PA

County: Monmouth

Genus-species: *Edovum puttleri* PA
Oplonus ebulinus PR
Pediobius foveolatus PA

County: Morris

Genus-species: *Glyptapanteles flavicoxis* PA
Pediobius foveolatus PA

County: Ocean

Genus-species: *Oplonus ebulinus* PR
Pediobius foveolatus PA

County: Salem

Genus-species: *Oplonus ebulinus* PR
Pediobius foveolatus PA

County: Somerset

Genus-species: *Pediobius foveolatus* PA

County: Sussex

Genus-species: *Glyptapanteles flavicoxis* PA

County: Warren

Genus-species: *Glyptapanteles flavicoxis* PA
Peristenus adelphocoridis PA
Peristenus digoneutis PA
Peristenus stygicus PA

State: NM

County: Chaves

Genus-species: *Oomyzus incertus* PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: NM (continued)

County: Dona Ana

Genus-species: *Microctonus aethiopoides* PA
Oomyzus incertus PA

County: Eddy

Genus-species: *Oomyzus incertus* PA

State: NV

County: Clark

Genus-species: *Chalicodoma nigripes* PO

County: Lander

Genus-species: *Rhinocyllus conicus* WE

State: NY

County: Clinton

Genus-species: *Pholetesor pedias* PA

County: Columbia

Genus-species: *Pholetesor pedias* PA

County: Essex

Genus-species: *Urophora cardui* WE
Urophora quadrifasciata WE

County: Franklin

Genus-species: *Hyles euphorbiae* WE

County: Hamilton

Genus-species: *Hyles euphorbiae* WE

County: Jefferson

Genus-species: *Hyles euphorbiae* WE

County: St Lawrence

Genus-species: *Hyles euphorbiae* WE

State: NY (continued)

County: Suffolk

Genus-species: *Edovum puttleri* PA
Osmia cornifrons PO

County: Tompkins

Genus-species: *Edovum puttleri* PA
Urophora quadrifasciata WE

County: Ulster

Genus-species: *Pholetesor pedias* PA

County: Warren

Genus-species: *Urophora affinis* WE
Urophora quadrifasciata WE

County: Wayne

Genus-species: *Osmia cornifrons* PO

State: OH

County: Ashland

Genus-species: *Istocheta aldrichi* PA

County: Fayette

Genus-species: *Pediobius foveolatus* PA

County: Franklin

Genus-species: *Osmia cornifrons* PO

County: Highland

Genus-species: *Pediobius foveolatus* PA

County: Morrow

Genus-species: *Osmia cornifrons* PO

County: Perry

Genus-species: *Osmia cornifrons* PO

County: Pickaway

Genus-species: *Pediobius foveolatus* PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: OH

County: Pike

Genus-species: *Pediobius foveolatus* PA

County: Ross

Genus-species: *Pediobius foveolatus* PA

County: Wayne

Genus-species: *Bathyplectes anurus* PA
Istocheta aldrichi PA

State: OK

County:

Genus-species: *Bathyplectes curculionis* PA
Microctonus colesi PA

County: Alfalfa

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Beckham

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

County: Creek

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Custer

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Ellis

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

State: OK (continued)

County: Grady

Genus-species: *Dibrachoides dynastes* PA
Oomyzus incertus PA

County: Grant

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Harper

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA

County: Kiowa

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Logan

Genus-species: *Bathyplectes anurus* PA

County: Muskogee

Genus-species: *Bathyplectes anurus* PA
Coccinella septempunctata PR

County: Nowata

Genus-species: *Bathyplectes anurus* PA

County: Osage

Genus-species: *Bathyplectes anurus* PA

County: Ottawa

Genus-species: *Bathyplectes anurus* PA

County: Pawnee

Genus-species: *Bathyplectes anurus* PA

County: Roger Mills

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Microctonus colesi PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: OK (continued)

County: Texas

Genus-species: *Bathyplectes anurus* PA

County: Woods

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Microctonus colesi PA

County: Woodward

Genus-species: *Bathyplectes anurus* PA
Dibrachoides dynastes PA
Microctonus aethiopoides PA
Oomyzus incertus PA

State: OR

County:

Genus-species: *Botanophila seneciella* WE
Longitarsus jacobaeae WE
Tyria jacobaeae WE
Urophora affinis WE
Urophora quadrifasciata WE

County: Benton

Genus-species: *Oomyzus incertus* PA
Trioxys tenuicaudus PA
Urophora cardui WE

County: Clackamas

Genus-species: *Osmia cornifrons* PO

County: Deschutes

Genus-species: *Calophasia lunula* WE
Sphenoptera jugoslavica WE

County: Douglas

Genus-species: *Rhinocyllus conicus* WE

County: Grant

Genus-species: *Microlarinus lareynii* WE
Microlarinus lypriformis WE

State: OR (continued)

County: Jackson

Genus-species: *Microlarinus lareynii* WE
Microlarinus lypriformis WE
Osmia cornifrons PO

County: Lake

Genus-species: *Phrydiuchus tau* WE

County: Linn

Genus-species: *Microctonus aethiopoides* PA
Oomyzus incertus PA
Osmia cornifrons PO

County: Malheur

Genus-species: *Microlarinus lareynii* WE
Microlarinus lypriformis WE
Osmia cornifrons PO

County: Marion

Genus-species: *Hadroplontus litura* WE

County: Polk

Genus-species: *Apion fuscirostre* WE

County: Wasco

Genus-species: *Calophasia lunula* WE

County: Washington

Genus-species: *Osmia cornifrons* PO

County: Wheeler

Genus-species: *Microlarinus lareynii* WE
Microlarinus lypriformis WE

State: PA

County: Adams

Genus-species: *Glyptapanteles flavicoxis* PA

County: Bedford

Genus-species: *Glyptapanteles flavicoxis* PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: PA (continued)

County: Berks

Genus-species: Glyptapanteles flavicoxis PA

County: Blair

Genus-species: Glyptapanteles flavicoxis PA

County: Bucks

Genus-species: Glyptapanteles flavicoxis PA
Osmia cornifrons PO

County: Cameron

Genus-species: Glyptapanteles flavicoxis PA

County: Carbon

Genus-species: Glyptapanteles flavicoxis PA

County: Centre

Genus-species: Glyptapanteles flavicoxis PA

County: Chester

Genus-species: Glyptapanteles flavicoxis PA
Meigenia mutabilis PA
Tetrastichus crioceridis PA

County: Clearfield

Genus-species: Glyptapanteles flavicoxis PA

County: Clinton

Genus-species: Glyptapanteles flavicoxis PA

County: Columbia

Genus-species: Glyptapanteles flavicoxis PA

County: Cumberland

Genus-species: Glyptapanteles flavicoxis PA

County: Dauphin

Genus-species: Glyptapanteles flavicoxis PA

County: Elk

Genus-species: Glyptapanteles flavicoxis PA

State: PA (continued)

County: Franklin

Genus-species: Glyptapanteles flavicoxis PA
Osmia cornifrons PO

County: Fulton

Genus-species: Cotesia melanoscelus PA
Glyptapanteles flavicoxis PA
Glyptapanteles indiensis PA
Steinernema feltiae PA

County: Huntingdon

Genus-species: Glyptapanteles flavicoxis PA

County: Jefferson

Genus-species: Glyptapanteles flavicoxis PA

County: Lackawanna

Genus-species: Glyptapanteles flavicoxis PA

County: Lancaster

Genus-species: Glyptapanteles flavicoxis PA

County: Lawrence

Genus-species: Osmia cornifrons PO

County: Lebanon

Genus-species: Glyptapanteles flavicoxis PA
Osmia cornifrons PO

County: Luzerne

Genus-species: Glyptapanteles flavicoxis PA

County: Lycoming

Genus-species: Glyptapanteles flavicoxis PA

County: Monroe

Genus-species: Glyptapanteles flavicoxis PA

County: Montour

Genus-species: Glyptapanteles flavicoxis PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: PA (continued)

County: Northampton

Genus-species: Glyptapanteles flavicoxis PA

County: Northumberland

Genus-species: Glyptapanteles flavicoxis PA

County: Perry

Genus-species: Cotesia melanoscelus PA
Glyptapanteles flavicoxis PA
Glyptapanteles indiensis PA
Hyposoter lymantriae PA

County: Pike

Genus-species: Glyptapanteles flavicoxis PA

County: Potter

Genus-species: Glyptapanteles flavicoxis PA

County: Schuylkill

Genus-species: Glyptapanteles flavicoxis PA

County: Snyder

Genus-species: Glyptapanteles flavicoxis PA

County: Somerset

Genus-species: Glyptapanteles flavicoxis PA

County: Susquehanna

Genus-species: Glyptapanteles flavicoxis PA

County: Tioga

Genus-species: Glyptapanteles flavicoxis PA

County: Wayne

Genus-species: Aleiodes lymantriae PA
Glyptapanteles flavicoxis PA

County: Wyoming

Genus-species: Glyptapanteles flavicoxis PA

State: PA (continued)

County: York

Genus-species: Glyptapanteles flavicoxis PA

State: PW

County: Peleliou I

Genus-species: Oryctes-baculovirus MI

State: SC

County:

Genus-species: Bathyplectes curculionis PA
Microctonus colesi PA

County: Aiken

Genus-species: Encarsia lahorensis PA

County: Allendale

Genus-species: Encarsia lahorensis PA

County: Anderson

Genus-species: Bathyplectes anurus PA

County: Bamberg

Genus-species: Encarsia lahorensis PA

County: Barnwell

Genus-species: Agasicles hygrophila WE
Encarsia lahorensis PA
Microplitis demolitor PA

County: Beaufort

Genus-species: Encarsia lahorensis PA

County: Berkeley

Genus-species: Encarsia lahorensis PA

County: Charleston

Genus-species: Encarsia lahorensis PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: SC (continued)

County: Cherokee

Genus-species: Bathyplectes anurus PA
 Microctonus aethiopoides PA
 Microctonus colesi PA

County: Chester

Genus-species: Encarsia lahorensis PA

County: Chesterfield

Genus-species: Encarsia lahorensis PA

County: Colleton

Genus-species: Encarsia lahorensis PA

County: Darlington

Genus-species: Agasicles hygrophila WE
 Encarsia lahorensis PA
 Microplitis demolitor PA
 Palexorista laxa PA

County: Dillon

Genus-species: Encarsia lahorensis PA

County: Dorchester

Genus-species: Encarsia lahorensis PA

County: Edgefield

Genus-species: Encarsia lahorensis PA

County: Fairfield

Genus-species: Encarsia lahorensis PA

County: Florence

Genus-species: Encarsia lahorensis PA

County: Georgetown

Genus-species: Agasicles hygrophila WE
 Encarsia lahorensis PA

State: SC (continued)

County: Greenville

Genus-species: Bathyplectes anurus PA
 Microctonus aethiopoides PA
 Microctonus colesi PA

County: Greenwood

Genus-species: Bathyplectes anurus PA

County: Hampton

Genus-species: Encarsia lahorensis PA

County: Horry

Genus-species: Agasicles hygrophila WE
 Encarsia lahorensis PA

County: Jasper

Genus-species: Encarsia lahorensis PA

County: Kershaw

Genus-species: Encarsia lahorensis PA

County: Lexington

Genus-species: Encarsia lahorensis PA

County: Marion

Genus-species: Encarsia lahorensis PA

County: Newberry

Genus-species: Bathyplectes anurus PA
 Encarsia lahorensis PA
 Microctonus aethiopoides PA

County: Orangeburg

Genus-species: Bathyplectes anurus PA
 Encarsia lahorensis PA
 Microctonus aethiopoides PA

County: Richland

Genus-species: Encarsia lahorensis PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: SC (continued)

County: Saluda

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA

County: Sumter

Genus-species: Agasicles hygrophila WE
Encarsia lahorensis PA

State: SD

County:

Genus-species: Bathyplectes curculionis PA
Microctonus colesi PA

County: Fall River

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA

County: Lyman

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA

State: TN

County:

Genus-species: Bathyplectes curculionis PA
Microctonus colesi PA

County: Bedford

Genus-species: Bathyplectes anurus PA

County: Bradley

Genus-species: Bathyplectes anurus PA

County: Carroll

Genus-species: Bathyplectes anurus PA

County: Clay

Genus-species: Bathyplectes anurus PA

State: TN (continued)

County: Coffee

Genus-species: Bathyplectes anurus PA

County: Cumberland

Genus-species: Bathyplectes anurus PA

County: Davidson

Genus-species: Bathyplectes anurus PA

County: Dickson

Genus-species: Bathyplectes anurus PA

County: Dyer

Genus-species: Bathyplectes anurus PA

County: Fayette

Genus-species: Bathyplectes anurus PA

County: Fentress

Genus-species: Bathyplectes anurus PA

County: Franklin

Genus-species: Bathyplectes anurus PA

County: Giles

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA
Microctonus colesi PA
Oomyzus incertus PA

County: Greene

Genus-species: Istocheta aldrichi PA

County: Henry

Genus-species: Bathyplectes anurus PA

County: Knox

Genus-species: Istocheta aldrichi PA

County: Lauderdale

Genus-species: Bathyplectes anurus PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: TN (continued)

County: Lawrence

Genus-species: *Bathyplectes anurus* PA

County: Lincoln

Genus-species: *Bathyplectes anurus* PA

County: Loudon

Genus-species: *Bathyplectes anurus* PA

County: Macon

Genus-species: *Bathyplectes anurus* PA

County: Marshall

Genus-species: *Bathyplectes anurus* PA

County: Maury

Genus-species: *Bathyplectes anurus* PA

County: McMinn

Genus-species: *Bathyplectes anurus* PA

County: Montgomery

Genus-species: *Bathyplectes anurus* PA

County: Obion

Genus-species: *Bathyplectes anurus* PA

County: Overton

Genus-species: *Bathyplectes anurus* PA

County: Putnam

Genus-species: *Bathyplectes anurus* PA

County: Robertson

Genus-species: *Bathyplectes anurus* PA

County: Rutherford

Genus-species: *Bathyplectes anurus* PA

County: Shelby

Genus-species: *Bathyplectes anurus* PA

State: TN (continued)

County: Smith

Genus-species: *Bathyplectes anurus* PA

County: Sumner

Genus-species: *Bathyplectes anurus* PA

County: Tipton

Genus-species: *Bathyplectes anurus* PA

County: Warren

Genus-species: *Bathyplectes anurus* PA

County: White

Genus-species: *Bathyplectes anurus* PA

County: Williamson

Genus-species: *Bathyplectes anurus* PA

County: Wilson

Genus-species: *Bathyplectes anurus* PA

State: TX

County: LRGV (See Section IA, Note 117)

Genus-species: *Allorhogas pyralophagus* PA
Pediobius furvus PA
Rhaconotus roslinensis PA

County: Bailey

Genus-species: *Dibrachoides dynastes* PA
Oomyzus incertus PA

County: Bee

Genus-species: *Bathyplectes anurus* PA
Microctonus aethiopoides PA
Oomyzus incertus PA

County: Bell

Genus-species: *Amblyseius* sp. PR
Phytoseiulus persimilis PR

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: TX (continued)

County: Brazos

Genus-species: Euoniticellus intermedius OT
Onitis alexis OT

County: Burleson

Genus-species: Catolaccus grandis PA
Heterospilus annulatus PA
Heterospilus megalopus PA

County: Chambers

Genus-species: Agasicles hygrophila WE
Amynothrips andersoni WE

County: Gonzales

Genus-species: Neochetina bruchi WE
Neochetina eichhorniae WE

County: Grimes

Genus-species: Euoniticellus intermedius OT
Onitis alexis OT
Onthophagus bonasus OT
Onthophagus taurus OT

County: Hale

Genus-species: Oomyzus incertus PA

County: Jasper

Genus-species: Agasicles hygrophila WE
Amynothrips andersoni WE

County: Jefferson

Genus-species: Agasicles hygrophila WE
Amynothrips andersoni WE
Sameodes albiguttalis WE

County: Liberty

Genus-species: Encarsia lahorensis PA

County: Live Oak

Genus-species: Neochetina bruchi WE

State: TX (continued)

County: Lubbock

Genus-species: Aphidius colemani PA

County: Montgomery

Genus-species: Encarsia lahorensis PA

County: Nacogdoches

Genus-species: Encarsia lahorensis PA

County: Nueces

Genus-species: Encarsia lahorensis PA

County: Potter

Genus-species: Hippodamia variegata PR
Lioadalia flavomaculata PR

County: Victoria

Genus-species: Encarsia lahorensis PA

County: Washington

Genus-species: Bathyplectes anurus PA
Microctonus aethiopoides PA
Oomyzus incertus PA

County: Wilbarger

Genus-species: Dibrachoides dynastes PA
Microctonus aethiopoides PA
Oomyzus incertus PA

State: UT

County: Cache

Genus-species: Microctonus aethiopoides PA
Oomyzus incertus PA
Osmia cornuta PO

County: Davis

Genus-species: Rhinocyllus conicus WE

County: Emery

Genus-species: Rhinocyllus conicus WE

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: UT (continued)

County: Salt Lake

Genus-species: *Rhinocyllus conicus* WE

County: Sanpete

Genus-species: *Rhinocyllus conicus* WE

County: Utah

Genus-species: *Rhinocyllus conicus* WE

State: VA

County:

Genus-species: *Diaparsis temporalis* PA
Lemophagus curtus PA
Tetrastichus julis PA

County: Accomack

Genus-species: *Edovum puttleri* PA
Pediobius foveolatus PA

County: Albemarle

Genus-species: *Aleiodes lymantriae* PA

County: Alexandria

Genus-species: *Compsilura concinnata* PA
Glyptapanteles flavicoxis PA
Meteorus pulchricornis PA

County: Arlington

Genus-species: *Compsilura concinnata* PA
Glyptapanteles flavicoxis PA
Meteorus pulchricornis PA

County: Bland

Genus-species: *Hyles euphorbiae* WE

County: Caroline

Genus-species: *Pediobius foveolatus* PA

County: Charles City

Genus-species: *Pediobius foveolatus* PA

State: VA (continued)

County: Chesapeake

Genus-species: *Compsilura concinnata* PA
Meteorus pulchricornis PA
Pediobius foveolatus PA

County: Chesterfield

Genus-species: *Compsilura concinnata* PA

County: Clarke

Genus-species: *Compsilura concinnata* PA
Glyptapanteles flavicoxis PA
Meteorus pulchricornis PA
Trichosirocalus horridus WE

County: Culpeper

Genus-species: *Compsilura concinnata* PA
Meteorus pulchricornis PA
Trichosirocalus horridus WE

County: Dinwiddie

Genus-species: *Pediobius foveolatus* PA

County: Essex

Genus-species: *Pediobius foveolatus* PA

County: Fairfax

Genus-species: *Compsilura concinnata* PA
Glyptapanteles flavicoxis PA
Meteorus pulchricornis PA

County: Fauquier

Genus-species: *Compsilura concinnata* PA
Meteorus pulchricornis PA

County: Frederick

Genus-species: *Compsilura concinnata* PA
Meteorus pulchricornis PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: VA (continued)

County: Gloucester

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA
Pediobius foveolatus PA

County: Grayson

Genus-species: Trichosirocalus horridus WE

County: Hampton

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA

County: Hanover

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA
Pediobius foveolatus PA

County: Henrico

Genus-species: Pediobius foveolatus PA

County: Isle of Wight

Genus-species: Pediobius foveolatus PA

County: James City

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA

County: King William

Genus-species: Pediobius foveolatus PA

County: King and Queen

Genus-species: Pediobius foveolatus PA

County: Lancaster

Genus-species: Pediobius foveolatus PA

County: Loudoun

Genus-species: Aleiodes lymantriae PA
Compsilura concinnata PA
Glyptapanteles flavicoxis PA
Meteorus pulchricornis PA

State: VA (continued)

County: Mathews

Genus-species: Pediobius foveolatus PA

County: Middlesex

Genus-species: Pediobius foveolatus PA

County: New Kent

Genus-species: Compsilura concinnata PA
Pediobius foveolatus PA

County: Newport News

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA

County: Norfolk

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA

County: Northampton

Genus-species: Pediobius foveolatus PA

County: Northumberland

Genus-species: Pediobius foveolatus PA

County: Prince George

Genus-species: Pediobius foveolatus PA

County: Prince William

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA

County: Rappahanock

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA

County: Richmond

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA
Pediobius foveolatus PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: VA (continued)

County: Rockingham

Genus-species: Trichosirocalus horridus WE

County: Russell

Genus-species: Trichosirocalus horridus WE

County: Shenandoah

Genus-species: Trichosirocalus horridus WE

County: Smyth

Genus-species: Trichosirocalus horridus WE

County: Southampton

Genus-species: Pediobius foveolatus PA

County: Spotsylvania

Genus-species: Compsilura concinnata PA

County: Stafford

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA

County: Virginia Beach

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA
Pediobius foveolatus PA

County: Warren

Genus-species: Trichosirocalus horridus WE

County: Washington

Genus-species: Rhinocyllus conicus WE
Trichosirocalus horridus WE

County: Westmoreland

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA
Pediobius foveolatus PA

County: Wythe

Genus-species: Trichosirocalus horridus WE

State: VA (continued)

County: York

Genus-species: Compsilura concinnata PA
Meteorus pulchricornis PA

State: WA

County: Ferry

Genus-species: Chrysolina quadrigemina WE
Rhinocyllus conicus WE
Urophora cardui WE

County: Garfield

Genus-species: Diadegma laricinellum PA

County: Grant

Genus-species: Urophora cardui WE

County: Grays Harbor

Genus-species: Urophora cardui WE

County: Klickitat

Genus-species: Aceria chondrillae WE
Anthocoris nemorum PR
Chrysoperla carnea PR
Prionomitus mitratus PA
Puccinia chondrillina MI
Urophora cardui WE
Urophora stylata WE

County: Okanogan

Genus-species: Rhinocyllus conicus WE
Sphenoptera jugoslavica WE
Urophora cardui WE

County: San Juan

Genus-species: Urophora cardui WE

County: Spokane

Genus-species: Aceria chondrillae WE
Calophasia lunula WE
Puccinia chondrillina MI

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: WA (continued)

County: Stevens

Genus-species: Aceria chondrillae WE
Puccinia chondrillina MI
Rhinocyllus conicus WE

County: Walla Walla

Genus-species: Chrysolina quadrigemina WE
Rhinocyllus conicus WE
Urophora cardui WE

County: Whitman

Genus-species: Aceria chondrillae WE
Chrysolina quadrigemina WE
Puccinia chondrillina MI
Urophora cardui WE
Urophora stylata WE
Zeuxidiplosis giardi WE

County: Yakima

Genus-species: Anthocoris nemorum PR
Chrysolina quadrigemina WE
Edovum puttleri PA
Menochilus sexmaculatus PR
Prionomitus mitratus PA

State: WI

County:

Genus-species: Bathyplectes curculionis PA
Microctonus colesi PA

County: Adams

Genus-species: Bathyplectes anurus PA

County: Barron

Genus-species: Bathyplectes anurus PA

County: Brown

Genus-species: Bathyplectes anurus PA

State: WI (continued)

County: Buffalo

Genus-species: Bathyplectes anurus PA

County: Chippewa

Genus-species: Bathyplectes anurus PA

County: Clark

Genus-species: Bathyplectes anurus PA

County: Columbia

Genus-species: Bathyplectes anurus PA

County: Crawford

Genus-species: Bathyplectes anurus PA

County: Dane

Genus-species: Bathyplectes anurus PA

County: Dodge

Genus-species: Bathyplectes anurus PA

County: Door

Genus-species: Bathyplectes anurus PA

County: Dunn

Genus-species: Bathyplectes anurus PA

County: Florence

Genus-species: Bathyplectes anurus PA

County: Fond du Lac

Genus-species: Bathyplectes anurus PA
Dibrachoides dynastes PA

County: Grant

Genus-species: Bathyplectes anurus PA

County: Green

Genus-species: Bathyplectes anurus PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983
Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: WI (continued)

County: Iowa

Genus-species: Bathyplectes anurus PA
Dibrachoides dynastes PA

County: Jefferson

Genus-species: Bathyplectes anurus PA

County: Juneau

Genus-species: Bathyplectes anurus PA

County: Lafayette

Genus-species: Bathyplectes anurus PA

County: Manitowoc

Genus-species: Bathyplectes anurus PA

County: Marathon

Genus-species: Bathyplectes anurus PA

County: Marinette

Genus-species: Bathyplectes anurus PA

County: Monroe

Genus-species: Bathyplectes anurus PA

County: Oconto

Genus-species: Bathyplectes anurus PA

County: Outagamie

Genus-species: Bathyplectes anurus PA

County: Pierce

Genus-species: Bathyplectes anurus PA

County: Polk

Genus-species: Bathyplectes anurus PA

County: Portage

Genus-species: Bathyplectes anurus PA

State: WI (continued)

County: Richland

Genus-species: Bathyplectes anurus PA

County: Rock

Genus-species: Bathyplectes anurus PA

County: Sauk

Genus-species: Bathyplectes anurus PA

County: Shawano

Genus-species: Bathyplectes anurus PA

County: Sheboygan

Genus-species: Bathyplectes anurus PA

County: St Croix

Genus-species: Bathyplectes anurus PA

County: Trempealeau

Genus-species: Bathyplectes anurus PA

County: Vernon

Genus-species: Bathyplectes anurus PA

County: Washington

Genus-species: Bathyplectes anurus PA

County: Waukesha

Genus-species: Bathyplectes anurus PA

County: Waushara

Genus-species: Bathyplectes anurus PA

State: WV

County: Berkeley

Genus-species: Glyptapanteles flavicoxis PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VI - RELEASES OF INTRODUCED BENEFICIAL ORGANISMS BY STATE/TERRITORY AND COUNTY - 1983

Each County Followed by List of Released Organisms Alphabetized by Genus-species, with Type of Organism

State: WV (continued)

County: Jefferson

Genus-species: Glyptapanteles flavicoxis PA
Osmia cornifrons PO
Pediobius foveolatus PA

County: Morgan

Genus-species: Glyptapanteles flavicoxis PA

State: WY

County: Converse

Genus-species: Rhinocyllus conicus WE

County: Crook

Genus-species: Rhinocyllus conicus WE
Urophora cardui WE

County: Fremont

Genus-species: Microlarinus lareynii WE
Microlarinus lypriformis WE
Oomyzus incertus PA

County: Lincoln

Genus-species: Rhinocyllus conicus WE

County: Platte

Genus-species: Oomyzus incertus PA

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Allorhogas pyralophagus Marsh Hymenoptera Braconidae	Eoreuma loftini (Dyar) Mexican rice borer	Mexico	Trinidad & Tobago TAMU-JWS-83-0003	200 C
	SAME	Mexico	Trinidad & Tobago TAMU-JWS-83-0010	26 PHL&P
Aphidius smithi Sharma & Subba Rao Hymenoptera Aphidiidae	Acyrtosiphon pisum (Harris) pea aphid	USA-CA	Canada UCB-KSH-83-0092	? MU
Aphthona flava Guillebeau Coleoptera Chrysomelidae	Euphorbia esula Linnaeus leafy spurge	Italy, Tuscany	Canada BCWLE-83-0009	1260e A
Aphytis lingnanensis Compere Hymenoptera Aphelinidae	Aonidiella aurantii (Maskell) California red scale	China	USSR UCR-RFL-83-0010	? PHN
Aphytis melinus DeBach Hymenoptera Aphelinidae	Aonidiella aurantii (Maskell) California red scale	India Pakistan	USSR UCR-RFL-83-0009	? PHN
Beauveria bassiana (Balsamo) Vuillemin Moniliales	Nitidulid sp.	Australia (ARSEF #325)	Australia IPRU-RAH-83-0003	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
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Beauveria bassiana (Balsamo) Vuillemin Moniliales	Chilo plejadellus[?] Zincken "rice stem borer"	Australia (ARSEF #326) NOTE: 157	Australia IPRU-RAH-83-0004	CULT
	Acridid sp.	Australia (ARSEF #356)	Australia IPRU-RAH-83-0005	CULT
	Nilaparvata lugens (Stål) brown planthopper	China (PRC) (ARSEF #709)	United Kingdom IPRU-RAH-83-0015	CULT
	Malacosoma americanum (Fabricius) eastern tent caterpillar	USA-MA (ARSEF #1)	China (PRC) IPRU-RAH-83-0018	CULT
	Lymantria dispar (Linnaeus) gypsy moth	USSR (ARSEF #155)	China (PRC) IPRU-RAH-83-0022	CULT
	?	Czechoslovakia (ARSEF #159)	China (PRC) IPRU-RAH-83-0023	CULT
	SAME	USSR (ARSEF #288)	China (PRC) IPRU-RAH-83-0025	CULT
	SAME	Brazil (ARSEF #295)	China (PRC) IPRU-RAH-83-0026	CULT
	Lymantria dispar (Linnaeus) gypsy moth	Rumania (ARSEF #299)	China (PRC) IPRU-RAH-83-0027	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Beauveria bassiana (Balsamo) Vuillemin Moniliales	?	Japan (ARSEF #302)	China (PRC) IPRU-RAH-83-0028	CULT
	Cerambycid sp.	Mexico (ARSEF #319)	China (PRC) IPRU-RAH-83-0029	CULT
	Chilo plejadellus[?] Zincken "rice stem borer"	Australia (ARSEF #326) NOTE: 157	China (PRC) IPRU-RAH-83-0030	CULT
	?	Poland (ARSEF #333)	China (PRC) IPRU-RAH-83-0031	CULT
	Chalcodermus aeneus Boheman	USA-GA (ARSEF #337)	China (PRC) IPRU-RAH-83-0032	CULT
	Leptinotarsa decemlineata (Say) Colorado potato beetle	Germany, West (ARSEF #340)	China (PRC) IPRU-RAH-83-0033	CULT
	Cydia pomonella (Linnaeus) codling moth	Yugoslavia (ARSEF #503)	China (PRC) IPRU-RAH-83-0038	CULT
	Pachybrachis "pallicornis"	Malaysia (ARSEF #547)	China (PRC) IPRU-RAH-83-0039	CULT
	?	USSR (ARSEF #288)	Brazil IPRU-RAH-83-0045	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Beauveria bassiana (Balsamo) Vuillemin Moniliales	Ostrinia nubilalis (Hübner) European corn borer	China (PRC) (ARSEF #501)	Brazil IPRU-RAH-83-0048	CULT
	Leptocorisa sp.	Indonesia-Java (ARSEF #566)	Brazil IPRU-RAH-83-0050	CULT
	?	USSR (ARSEF #283)	Italy IPRU-RAH-83-0084	CULT
	Ostrinia nubilalis (Hübner) European corn borer	China (PRC) (ARSEF #501)	Italy IPRU-RAH-83-0085	CULT
Beauveria brongniartii (Saccardo) Petch Moniliales	Nephotettix cincticeps (Uhler)	China (PRC) (ARSEF #656)	United Kingdom IPRU-RAH-83-0013	CULT
Blepharipa pratensis (Meigen) Diptera Tachinidae	Lymantria dispar (Linnaeus) gypsy moth	USA, CT	China (PRC) FSHCT-TMO-83-0002	? P
Brachymeria intermedia (Nees) Hymenoptera Chalcididae	SAME	USA, CT	China (PRC) FSHCT-TMO-83-0001	? C
Chrysocharis oscinidis Ashmead Hymenoptera Eulophidae	Liriomyza spp. Agromyzid leafminers	USA-CA	United Kingdom HDA-83-2001	500e A

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Chrysocharis oscinidis Ashmead Hymenoptera Eulophidae	Liriomyza spp. Agromyzid leafminers	USA-CA	United Kingdom HDA-83-2003	760e A
	Liriomyza trifolii (Burgess) leafminer	USA-CA	Trinidad & Tobago UCREE-MPP-83-0003	100 P
	SAME	USA-CA	Netherlands UCREE-MPP-83-0007	? P
Chrysocharis caribea Boucek Hymenoptera Eulophidae	Liriomyza spp. Agromyzid leafminers	Trinidad & Tobago	United Kingdom HDA-83-1001	300e A
	SAME	Trinidad & Tobago	United Kingdom HDA-83-1003	500e A
Chrysonotomyia punctiventris (Crawford) Hymenoptera Eulophidae	SAME	USA-CA	United Kingdom HDA-83-3001	500e A
	SAME	USA-CA	United Kingdom HDA-83-3003	500e A
Conidiobolus obscurus (Hall & Dunn) R. & K. Entomophthorales Ancylistaceae	Myzus persicae (Sulzer) green peach aphid	USA-ME (ARSEF #129)	Japan IPRU-RAH-83-0079	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Conidiobolus obscurus (Hall & Dunn) R. & K. Entomophthorales Ancylistaceae	Myzus persicae (Sulzer) green peach aphid	? (ARSEF #236)	Japan IPRU-RAH-83-0080	CULT
Conidiobolus thromboides Drechsler Entomophthorales Ancylistaceae	Aphis gossypii Glover cotton/melon aphid	Israel (ARSEF #194)	Turkey IPRU-RAH-83-0010	CULT
	Myzus persicae (Sulzer) green peach aphid	USA-ME (ARSEF #2)	Japan IPRU-RAH-83-0077	CULT
	SAME	USA-ME (ARSEF #41)	Japan IPRU-RAH-83-0078	CULT
Cotesia melanoscelus (Ratzeburg) Hymenoptera Braconidae	Lymantria dispar (Linnaeus) gypsy moth	Korea, South (ROK)	Canada BIRL-RWF-83-0202	55 C
Culicinomyces clavisporus Couch, Romney & Rao Moniliales	Anopheles quadrimaculatus Say common malaria mosquito	USA-NC (ARSEF #372)	Canada IPRU-RAH-83-0063	CULT
	SAME	USA-NC (ARSEF #582-585)	Canada IPRU-RAH-83-0064	CULT
Culicinomyces clavisporus Couch, Romney & Rao Moniliales	Culicid sp.	USA-NC (ARSEF #706)	Canada IPRU-RAH-83-0065	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Diachasmimorpha tryoni (Cameron) Hymenoptera Braconidae	Ceratitidis capitata (Wiedemann) Mediterranean fruit fly	USA-HI	Israel TFVRL-TTYW-83-0009	1200e A
Diglyphus intermedius (Girault) Hymenoptera Eulophidae	Liriomyza trifolii (Burgess) leafminer	USA-CA	Trinidad & Tobago UCREE-MPP-83-0002	65 A
	Liriomyza sp. Agromyzid leafminers	USA-FL	Trinidad & Tobago UFH-RMB-83-0001	1300e A
Ditylenchus phyllobius (Thorne, 1934) Tylenchida Anguinidae	Solanum elaeagnifolium Cav. silverleaf nightshade	USA-TX	South Africa PPQMTX-PEP-83-0001	? J
Edovum puttleri Grissell Hymenoptera Eulophidae	Leptinotarsa undecimlineata (Stål)	Colombia	Canada BCIRL-BP-83-0001	130e P
	SAME	Colombia	Canada BCIRL-BP-83-0002	150 P
	SAME	Colombia	Netherlands BIIL-RFWS-83-0056	500e PHE

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Encarsia transvena (Timberlake) Hymenoptera Aphelinidae	Trialeurodes vaporariorum (Westwood) greenhouse whitefly	USA-HI	Israel HDA-83-0009	300e P
	SAME	USA-HI	Israel HDA-83-0011	? P
Entomophaga aulicae (Reichardt) Humber Entomophthorales Entomophthoraceae	Choristoneura fumiferana (Clemens) spruce budworm	USA-ME (ARSEF #168)	Brazil IPRU-RAH-83-0058	CULT
	Aedia leucomelas (Linnaeus) sweetpotato leafworm	Japan (ARSEF #198)	Brazil IPRU-RAH-83-0059	CULT
Furia pieris (Li & Humber) Humber Entomophthorales Entomophthoraceae	Pieris rapae (Linnaeus) imported cabbageworm	USA-NY (ARSEF #781)	China (PRC) IPRU-RAH-83-0040	CULT
	SAME	USA-NY (ARSEF #781)	Brazil IPRU-RAH-83-0061	CULT
Furia virescens (Thaxter) Humber Entomophthorales Entomophthoraceae	Noctuid sp.	Switzerland (ARSEF #470)	Brazil IPRU-RAH-83-0060	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

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Galendromus occidentalis (Nesbitt) Parasitiformes Phytoseiidae	Tetranychus spp.	USA-CA,WA	China (ROC) HDA-83-1008	74 E
Ganaspidium utilis Beardsley Hymenoptera Eucoilidae	Liriomyza spp. Agromyzid leafminers	USA-HI	United Kingdom HDA-83-6003	500e A
Glyptapanteles flavicoxis (Marsh) Hymenoptera Braconidae	Lymantria obfuscata (Walker)	India	China (PRC) BIRL-PWS-83-0078	510 A,C
Habrobracon hebetor (Say) Hymenoptera Braconidae	Plodia interpunctella (Hübner) Indianmeal moth	USA-GA	UK, England SPIRDL-JWP-83-0002	? C
Halticoptera circulus (Walker) Hymenoptera Pteromalidae	Liriomyza spp. Agromyzid leafminers	USA-CA	United Kingdom HDA-83-4001	500e A
	SAME	USA-CA	United Kingdom HDA-83-4003	500e A
Heterorhabditis bacteriophora Poinar, 1976 Rhabditida Heterorhabditidae	Helicoverpa zea (Boddie) corn earworm, bollworm	USA, NC	Canada NCSU-WMB-83-0001	? A,J

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Hirsutella citriformis Speare Moniliales	Nilaparvata lugens (Stål) brown planthopper	Philippines-Luzon (ARSEF #490)	United Kingdom IPRU-RAH-83-0044	CULT
	SAME	Philippines-Luzon (ARSEF #490)	United Kingdom IPRU-RAH-83-0067	CULT
Hirsutella gigantea Petch Moniliales	Choristoneura fumiferana (Clemens) spruce budworm	USA-ME (ARSEF #177)	China (PRC) IPRU-RAH-83-0024	CULT
Hirsutella thompsonii Fisher Moniliales	Phyllocoptruta oleivora (Ashmead) citrus rust mite	USA-FL (ARSEF #137)	Italy IPRU-RAH-83-0088	CULT
Hyposoter lymantriae Cushman Hymenoptera Ichneumonidae	Lymantria obfuscata (Walker)	India	Canada BIRL-RWF-83-0186	100 C
	SAME	India	Canada BIRL-RWF-83-0189	100 C
Lepidoptera sp. Lepidoptera	Baccharis pilularis consanguinea (DC.) Ktze. kidneywort baccharis	USA-CA	USA (Australian Sta) UCD-LEE-83-0005-B	130e L
Longitarsus jacobaeae (Waterhouse) Coleoptera Chrysomelidae	Senecio jacobaeae Linnaeus tansy ragwort	USA-OR	New Zealand ORDA-RBH-83-0007	? A

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Lysiphlebus testaceipes (Cresson) Hymenoptera Aphidiidae	Schizaphis graminum (Rondani) greenbug	USA, OK	China (PRC) PSRL-RLB-83-0001-A	3000e MU
	SAME	USA, OK	China (PRC) PSRL-RLB-83-0001-B	3000e MU
	SAME	USA, OK	China (PRC) PSRL-RLB-83-0001-C	3000e MU
Metarhizium anisopliae (Metschnik.) Sorokin Moniliales	Austracris guttulosa (Walker)	Australia (ARSEF #324)	Australia IPRU-RAH-83-0002	CULT
	Teleogryllus commodus (Walker)	Australia (ARSEF #435)	Australia IPRU-RAH-83-0007	CULT
	Teleogryllus commodus (Walker)	Australia (ARSEF #438)	Australia IPRU-RAH-83-0008	CULT
	?Dasygnathus sp.	Australia (ARSEF #472)	USA IPRU-RAH-83-0009	CULT
	Nilaparvata lugens (Stål) brown planthopper	Philippines-Luzon (ARSEF #486)	United Kingdom IPRU-RAH-83-0012	CULT
	Deois flavopicta (Stål)	Brazil (ARSEF #729)	United Kingdom IPRU-RAH-83-0016	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Metarhizium anisopliae (Metschnik.) Sorokin Moniliales	Nilaparvata lugens (Stål) brown planthopper	Philippines-Luzon (ARSEF #455)	China (PRC) IPRU-RAH-83-0035	CULT
	Mocis sp.	Colombia (ARSEF #587)	Brazil IPRU-RAH-83-0051	CULT
	Pentatomid sp.	Brazil (ARSEF #755)	Brazil IPRU-RAH-83-0053	CULT
	Deois flavopicta (Stål)	Brazil (ARSEF #925)	Israel IPRU-RAH-83-0062	CULT
	Deois flavopicta (Stål)	Brazil (ARSEF #925)	United Kingdom IPRU-RAH-83-0068	CULT
	Elaterid sp.	USA-NC (ARSEF #888)	United Kingdom IPRU-RAH-83-0069	CULT
	Deois flavopicta (Stål)	Brazil (ARSEF #925)	Singapore IPRU-RAH-83-0070	CULT
	Deois flavopicta (Stål)	Brazil (ARSEF #925)	Bolivia IPRU-RAH-83-0081	CULT
	Cercopid sp.	Brazil (ARSEF #1044)	Bolivia IPRU-RAH-83-0082	CULT
	SAME	Brazil (ARSEF #1045)	Bolivia IPRU-RAH-83-0083	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Metarhizium anisopliae (Metschnik.) Sorokin Moniliales	Nilaparvata lugens (Stål) brown planthopper	Philippines-Luzon (ARSEF #487)	Italy IPRU-RAH-83-0086	CULT
	Cercopid sp.	Brazil (ARSEF #550)	Italy IPRU-RAH-83-0087	CULT
	Deois flavopicta (Stål)	Brazil (ARSEF #925)	United Kingdom IPRU-RAH-83-0089	CULT
	Elaterid sp.	USA-NC (ARSEF #1094)	United Kingdom IPRU-RAH-83-0090	CULT
Microctonus stelleri Loan Hymenoptera Braconidae	Hypera postica (Gyllenhal) alfalfa weevil	France	Canada EPL-83-0022	5 C
Micromeriella marginella modesta (Smith) Hymenoptera Scoliidae	Anomala orientalis Waterhouse Oriental beetle	USA-HI	China (ROC) HDA-83-0016	65 A
Microplitis croceipes (Cresson) Hymenoptera Braconidae	Heliothis (s.lat.) spp.	USA-AR	Egypt SRQF-83-0087	72 C
Microplitis demolitor (Wilkinson) Hymenoptera Braconidae	Helicoverpa armigera (Hübner)	Australia	Egypt SRQF-83-0085	50 C

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Microplitis rufiventris Kokujev Hymenoptera Braconidae	Spodoptera littoralis (Boisduval)	Egypt	Egypt SRQF-83-2084	50 C
Neoseiulus californicus (McGregor) Acarina Phytoseiidae	Tetranychus spp.	USA-CA	China (ROC) HDA-83-2008	106 E
Neoseiulus fallacis (Garman) Parasitiformes Phytoseiidae	Panonychus ulmi (Koch) European red mite	USA, MI	China (PRC) MISU-MEW-83-0001	? A
	SAME	USA-MI	China (ROC) MISU-MEW-83-0002	? A
Nomuraea rileyi (Farlow) Samson Moniliales	Spodoptera sp.	Australia (ARSEF #323)	Australia IPRU-RAH-83-0001	CULT
	SAME	Australia (ARSEF #380)	Australia IPRU-RAH-83-0006	CULT
	SAME	Australia (ARSEF #358)	China (PRC) IPRU-RAH-83-0034	CULT
	Lymantria sp.	Philippines-Luzon (ARSEF #482)	China (PRC) IPRU-RAH-83-0037	CULT
	Spodoptera sp.	Australia (ARSEF #323)	Brazil IPRU-RAH-83-0046	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES

Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Nomuraea rileyi (Farlow) Samson Moniliales	Lymantria sp.	Philippines-Luzon (ARSEF #481)	Brazil IPRU-RAH-83-0047	CULT
	Spodoptera exigua (Hübner) beet armyworm	Thailand (ARSEF #539)	Brazil IPRU-RAH-83-0049	CULT
	Bombyx mori (Linnaeus) silkworm	China (PRC) (ARSEF #711)	Brazil IPRU-RAH-83-0052	CULT
	Plathypena scabra (Fabricius) green cloverworm	USA-MO (ARSEF #762)	Brazil IPRU-RAH-83-0054	CULT
Oberea erythrocephala (Schränk) Coleoptera Cerambycidae	Euphorbia esula Linnaeus leafy spurge	Italy, Tuscany	Switzerland BCWLE-83-0007	100e A
Olla abdominalis (Say) Coleoptera Coccinellidae	arboreal aphids	USA-GA	France SFTNRL-WLT-83-0001-A	150 A
	SAME	USA-GA	France SFTNRL-WLT-83-0001-B	150 A
	SAME	USA-GA	France SFTNRL-WLT-83-0001-C	150 A

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Opius bruneipes Gahan Hymenoptera Braconidae	Liriomyza sp. Agromyzid leafminers	USA-FL	Trinidad & Tobago UFH-RMB-83-0002	1050e A
Opius dimidiatus (Ashmead) Hymenoptera Braconidae	?	USA-CA	Trinidad & Tobago UCREE-MPP-83-0004	40 A
Opius dissitus Muesebeck Hymenoptera Braconidae	Liriomyza spp. Agromyzid leafminers	USA-FL	United Kingdom HDA-83-5001	500e A
	SAME	USA-FL	United Kingdom HDA-83-5003	250e A
Osmia cornifrons (Radoszkowski) Hymenoptera Megachilidae	apple	USA, MD (orig. Japan)	Canada BIIL-SWTB-83-0032	200e A
Osmia lignaria Say Hymenoptera Megachilidae	SAME	USA-MD	Japan BIIL-SWTB-83-0068	1675e A
Paecilomyces farinosus (Holm ex SFGrey) B&S Moniliales	Malacosoma americanum (Fabricius) eastern tent caterpillar	USA-MA (ARSEF #3)	China (PRC) IPRU-RAH-83-0019	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES

Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Paecilomyces farinosus (Holm ex SFGrey) B&S Moniliales	Lymantria dispar (Linnaeus) gypsy moth	USA-PA (ARSEF #20)	China (PRC) IPRU-RAH-83-0020	CULT
Palexorista laxa (Curran) Diptera Tachinidae	Heliothis (s.lat.) sp.	Kenya	Egypt SRQF-83-0086	50 P
Pandora delphacis (Hori) Humber Entomophthorales Entomophthoraceae	Nephotettix cincticeps (Uhler)	Philippines-Luzon (ARSEF #478)	United Kingdom IPRU-RAH-83-0011	CULT
	Nilaparvata lugens (Stål) brown planthopper	China (PRC) (ARSEF #665)	United Kingdom IPRU-RAH-83-0014	CULT
	Nephotettix cincticeps (Uhler)	Philippines-Luzon (ARSEF #478)	China (PRC) IPRU-RAH-83-0036	CULT
Pandora neoaphidis (Rem. & Henn.) Humber Entomophthorales Entomophthoraceae	Aphidid sp.	Israel (ARSEF #78)	Japan IPRU-RAH-83-0073	CULT
	Aphis fabae Scopoli bean aphid	Poland (ARSEF #611)	Japan IPRU-RAH-83-0074	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Pediobius foveolatus (Crawford) Hymenoptera Eulophidae	Henosepilachna vigintioctopunctata (Fabricius) =Epilachna vigintioctopunctata	Japan, Honshu	Western Samoa BIRL-PWS-83-0077	418e A, MU
	?	India	Western Samoa BIRL-PWS-83-0201	30 MU
Pediobius fervus (Gahan) Hymenoptera Eulophidae	Chilo partellus (Swinhoe)	Kenya	Trinidad & Tobago TAMU-JWS-83-0005	10 PHP
	SAME	Kenya	Trinidad & Tobago TAMU-JWS-83-0009	56 PHP
Podisus maculiventris Say Heteroptera Pentatomidae	various Coleoptera & Lepidoptera	USA-TN	China (PRC) UTN-PLL-83-0001	150e E
Prochocerodes sp. Lepidoptera Geometridae	Baccharis pilularis pilularis DC. coyotebrush	USA-CA	USA (Australian Sta) UCD-LEE-83-0004-A	? L, P
Prochoerodes truxaliata (Guenée) Lepidoptera Geometridae	Baccharis pilularis pilularis DC. coyotebrush	USA-CA	USA (Australian Sta) UCD-LEE-83-0002	30e L

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES

Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Psytalia incisi (Silvestri) Hymenoptera Braconidae	Dacus dorsalis Hendel Oriental fruit fly	USA-HI	Israel TFVRL-TTYW-83-0010	400 A
Puccinia carduorum Jacky Uredinales Pucciniaceae	Carduus nutans Linnaeus musk thistle	Greece	Switzerland BCWLEGR-83-2005	? SPORES
Puccinia carduorum Jacky Uredinales Puccinaceae	Carduus pycnocephalus Linnaeus Italian thistle	Greece	Switzerland BCWLEGR-83-2006	? SPORES
	Rumex crispus Linnaeus curly dock	Greece	Switzerland BCWLEGR-83-2010	? SPORES
Puccinia sp. Uredinales Pucciniaceae	Centaurea calcitrapa Linnaeus purple starthistle	Greece	Switzerland BCWLEGR-83-2016	? SPORES
Pyropteron chrysidiforme (Esper) Lepidoptera Sesiidae	Rumex crispus Linnaeus curly dock	Italy, Latium	France BCWLE-83-2006	1385 E

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
Arranged Alphabetically by Genus-species of Organism Shipped

Species Shipped - Genus, Species, Subsp. Author, Order, Family	Host/Prey at Collection Site Genus, Species, Subsp. Author, Common Name	Origin	Shipped to Country Shipper File Number	Shipped - No. Stage
Rhaconotus roslinensis Lal Hymenoptera Braconidae	Acigona steniellus (Hampson)	Pakistan	Trinidad & Tobago TAMU-JWS-83-0004	70 C
	SAME	Pakistan	Trinidad & Tobago TAMU-JWS-83-0008	27 PHL&P
Rhopalomyia californica Felt Diptera Cecidomyiidae	Baccharis pilularis pilularis DC. coyotebush	USA-CA	USA (Australian Sta) UCD-LEE-83-0004-B	125e L,P
Steinernema glaseri (Steiner, 1929) Rhabditida Steinernematidae	Strigoderma arboricola (Fabricius)	USA, NC	New Zealand NCSU-WMB-83-0002	? A,J
Tolypocladium cylindrosporum Gams Moniliales	Aedes sierrensis (Ludlow) western treehole mosquito	USA-CA (ARSEF #705)	Australia IPRU-RAH-83-0041	CULT
Tolypocladium niveum (Rostrup) Bissett Moniliales	?	Czechslovakia (ARSEF #616)	Canada IPRU-RAH-83-0066	CULT
Trichogramma nubilale Ertle & Davis Hymenoptera Trichogrammatidae	Ostrinia nubilalis (Hübner) European corn borer	USA, DE	China (PRC) BIRL-LRE-83-0017	100e PHE

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
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Trichogramma pretiosum Riley Hymenoptera Trichogrammatidae	Heliothis virescens (Fabricius) tobacco budworm	USA-AR	China (PRC) BIIL-ACFH-83-0078	215 A, PHE
	Heliothis (s.lat.) sp.	USA-TX	China (PRC) BIIL-ACFH-83-0079	225 A, PHE
Trichosirocalus horridus (Panzer) Coleoptera Curculionidae	Carduus nutans Linnaeus musk thistle	USA-VA	Argentina VPI-LTK-83-0006	300e A
Trirhabda flavolimbata (Mannerheim) Coleoptera Chrysomelidae	Baccharis pilularis consanguinea (DC.) Ktze. kidneywort baccharis	USA-CA	USA (Australian Sta) UCD-LEE-83-0003	50e L
	SAME	USA-CA	USA (Australian Sta) UCD-LEE-83-0005-A	130e L
Trissolcus basalis (Wollaston) Hymenoptera Scelionidae	Nezara viridula (Linnaeus) southern green stink bug	USA-HI	China (ROC) HDA-83-0002	31 PHEM
	SAME	USA-HI	China (ROC) HDA-83-0004-A	36 PHEM
	SAME	USA-HI	China (ROC) HDA-83-0004-B	36 PHEM
	SAME	USA-HI	China (ROC) HDA-83-0006	24 PHEM

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION VII - SHIPMENTS OF BENEFICIAL ORGANISMS FROM U.S. AND TERRITORIAL FACILITIES TO FOREIGN COUNTRIES
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Tytthus mundulus (Breddin) Heteroptera Miridae	Perkinsiella saccharicida Kirkaldy sugarcane delphacid	USA-HI	China (PRC) HDA-83-0007	650e A,N
	SAME	USA-HI	China (PRC) HDA-83-0012	600e A,N
Xylocoris flavipes (Reuter) Heteroptera Anthocoridae	various stored- product insects	USA-GA	UK, England SPIRDL-JWP-83-0001	? A
Xylocoris flavipes (Reuter) Heteroptera Anthocoridae	various stored- product insects	USA-GA	UK, England SPIRDL-JWP-83-0003	? A
Zoopthora aphidis (Hoffmann) Batko Entomophthorales Entomophthoraceae	Anoecia corni (Fabricius)	Switzerland (ARSEF #425)	Australia IPRU-RAH-83-0017	CULT
	SAME	Switzerland (ARSEF #425)	Israel IPRU-RAH-83-0043	CULT
Zoopthora occidentalis (Thaxter) Batko Entomophthorales Entomophthoraceae	Macrosiphum euphorbiae (Thomas) potato aphid	USA-ME (ARSEF #207)	Japan IPRU-RAH-83-0075	CULT
	SAME	USA-ME (ARSEF #207)	Israel IPRU-RAH-83-0042	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
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Zoophthora phalloides Batko Entomophthorales Entomophthoraceae	Macrosiphum ranunculinum Walker =Tubaphis ranunculina (Walker)	? (ARSEF #352)	Japan IPRU-RAH-83-0076	CULT
Zoophthora radicans (Brefeld) Batko Entomophthorales Entomophthoraceae	Choristoneura fumiferana (Clemens) spruce budworm	USA-ME (ARSEF #141)	China (PRC) IPRU-RAH-83-0021	CULT
	Tortrix viridana Linnaeus	France (ARSEF #68)	Brazil IPRU-RAH-83-0055	CULT
Zoophthora radicans (Brefeld) Batko Entomophthorales Entomophthoraceae	Lambdina fiscellaria fiscellaria (Guenée) hemlock looper	Canada (ARSEF #72)	Brazil IPRU-RAH-83-0056	CULT
	Choristoneura fumiferana (Clemens) spruce budworm	USA-ME (ARSEF #141)	Brazil IPRU-RAH-83-0057	CULT
	Therioaphis maculata (Buckton) spotted alfalfa aphid	Israel (ARSEF #104)	Japan IPRU-RAH-83-0071	CULT
	SAME	Australia (ARSEF #359)	Japan IPRU-RAH-83-0072	CULT

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
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Zygogramma disrupta Rogers Coleoptera Chrysomelidae	Ambrosia psilostachya DC western ragweed	USA-TX	USSR GSWRL-CJD-83-0001	418 A,L
natural enemies of baccharis	Baccharis pilularis consanguinea (DC.) Ktze. kidneywort baccharis	USA-CA	USA (Australian Sta) UCD-LEE-83-0001	? A,L
parasites of bark beetles NOTE: 137, 139	Ips spp.	USA-GA	Australia UGA-CWB-83-0001	? A,C
parasites of pineapple mealybugs	Dysmicoccus brevipes (Cockerell) pineapple mealybug	USA-HI	South Africa HDA-83-0013	? PHL
parasites of pineapple mealybugs	Dysmicoccus brevipes (Cockerell) pineapple mealybug	USA-HI	South Africa HDA-83-0015	60e A,PHL
predators of bark beetles NOTE: 138	Dendroctonus frontalis Zimmermann southern pine beetle	USA-GA	Australia UGA-CWB-83-0002	? A,L

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
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NOTES

137 Data are not available on actual parasite species shipped by UGA to Australia in 1983. The following were sent from Georgia in 1982-86: Roptrocercus xylophagorum (Ratzeburg), Dendrosoter sulcatus Muesebeck, Spathius pallidus Ashmead, Eurytoma conica Provancher, Coeloides pissodis (Ashmead) & Heterospilus sp. (see Berisford, C L, & D L Dahlsten, 1989; cited in Note 138).

138 Data are not available on actual predator species shipped by UGA to Australia in 1983. The following were sent from Georgia in 1982-86: Thanasimus dubius (Fabricius) (Col.: Cleridae) & Temnochila virescens (Fabricius) (Col.: Trogositidae) (see Berisford & Dahlsten, pp. 81-93 in Kulhavy, D L, & M C Miller, "Potential for Biological Control ... Bark Beetles," 1989.)

139 No species are recorded as sent from California to Australia in 1983. However, with the 2 species recorded as shipped by UCB in the 1982 ROBO Rpt., a third species, Coeloides sympitys Mason, was also sent in 1982 (now recorded as UCB-DLD-83-0013 in the ROBO database), teste D L Dahlsten, UCB, 1992.

157 Original host for ARSEF #326 was originally reported as "rice stem borer," and later assumed to be Chilo plejadellus. A 1979 report from R. S. Soper lists original host of RS 326 as Nilaparvata lugens.

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VIII - PARTICIPATING RESEARCH AND ACTION AGENCY PERSONNEL - 1983

PART A - Quarantine Facilities, Listed Alphabetically by acronym, with Addresses and Quarantine Officers

1. BBSL	Bee Biology and Systematics Lab ARS, USDA Utah State University Logan UT 84322 USA	D F Viers, Quarantine Officer
2. BCIRL	Biological Control of Insects Res Lab ARS, USDA Research Park, P.O. Box A Columbia MO 65205 USA	B Puttler, Quarantine Officer
3. BCWRL	Biological Control of Weeds Research Lab ARS, USDA 1050 San Pablo Ave Albany CA 94706 USA	A H Krueger, Quarantine Officer
4. BIIL-PPQ	Plant Germplasm Quarantine Center APHIS-PPQ, USDA (c/o BIIL) Bldg. 320, BARC-East Beltsville MD 20705 USA	c/o S W T Batra, BIIL
5. BIRL	Beneficial Insects Research Laboratory ARS, USDA 501 South Chapel Street Newark DE 19713 USA	L R Ertle, Quarantine Officer
6. FBCL	Florida Biological Control Laboratory Division of Plant Industry, FDACS P.O. Box 1269 Gainesville FL 32602 USA	C A Bennett, Quarantine Officer
7. GSWRL	Grassland, Soil and Water Research Lab ARS, USDA P.O. Box 748 Temple TX 76501 USA	P E Boldt, Quarantine Officer
8. HDA	Hawaii Department of Agriculture 1428 South King Street Honolulu, Oahu HI 96814 USA	G Y Funasaki, Quarantine Officer
9. IPRU	Insect Pathology Research Unit (& ARSEF) ARS, USDA c/o Boyce Thompson Inst. Cornell Univ Ithaca NY 14853 USA	R A Humber, Quarantine Officer
10. PDRL	Plant Disease Research Laboratory ARS, USDA P.O. Box 1209 Frederick MD 21701 USA	W L Bruckart, Quarantine Officer
11. SRQF	Stoneville Research Quarantine Facility ARS, USDA P.O. Box 225 Stoneville MS 38776 USA	W W Harrison, Quarantine Officer
12. TAMU	Texas A&M University Department of Entomology College Station TX 77843 USA	J P Cuda/M J Rose, Quarantine Officers
13. UCB	University of California, Berkeley Division of Biological Control Department of Entomology Albany CA 94706 USA	J Hamai, Quarantine Officer

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983

SECTION VIII - PARTICIPATING RESEARCH AND ACTION AGENCY PERSONNEL - 1983

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14. UCD	University of California, Davis Department of Entomology Davis CA 95616 USA	L E Ehler, Quarantine Officer
15. UCR	University of California, Riverside Division of Biological Control Department of Entomology Riverside CA 92521 USA	M E Badgley, Quarantine Officer
16. UFGPPD	Plant Pathology Department University of Florida Gainesville FL 32611 USA	R Charudattan, Quarantine Officer
17. VPI	Virginia Polytechnic Inst & State Univ Department of Entomology Blacksburg VA 24061 USA	L T Kok, Quarantine Officer
18. VTERL	Veterinary Toxicology & Entomol Res Lab ARS, USDA P. O. Drawer GE College Station TX 77841 USA	G T Fincher, Quarantine Officer

ANNUAL REPORT OF INTRODUCED BENEFICIAL ORGANISMS RELEASED IN THE UNITED STATES AND TERRITORIES - 1983
SECTION IX - SUMMARY INFORMATION - 1983

	<u>Total Number of Species Released</u>	<u>Total Number of Specimens Released</u>	<u>Total Number of Hosts/Prey Released Against</u>	<u>Total Number States/Terr. Releases Made</u>	<u>Total Number of Counties Releases Made</u>
Parasites	117	14,672,691e+	70	45	809
Predators	47	571,934e+	16	14	34
Weed Control Agents	29	11,896,081e+	21	22	149
Microbial Agents	3	N/A	3	3	6
Pollinators	3	13,749e	N/A	19	32
Other Beneficial Species	4	2,708	N/A	1	3
Grand Totals	203	27,157,163e+	99	51	924

+ = Some records with unknown release amounts

NOTE: Some parasites and predators were released against the same hosts/prey and therefore the grand total is not a sum of the figures in that column. Similarly, several kinds of beneficial organisms were released in the same States/Territories and counties, and the grand totals are not the sums of the figures in those columns.

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